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# Chief Medical Officer for Wales Annual Report 2014-15

Healthier, Happier, Fairer



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## Acknowledgements

I would like to thank colleagues from the Welsh Government for contributing to the development and editing of this report. Special thanks to Jill Nicholas and Rob Stammers for managing the production of the report, and also to, Cath Roberts, Leighton Phillips, Dr Chris Jones, Natalie Avery, Irfon Rees, Dr Andrew Riley, Chris Brereton, Chris Johnson, Dr Layla Jader, Dr Christopher Bidder, Alun Williams, Chantelle Meah, Suzanne Moore Osley. I would also like to acknowledge the contribution made by colleagues in Public Health Wales in providing material and assisting with the reviewing of this report.

## Letter to the First Minister

I have pleasure in presenting my third annual report in which I look at newly available information, progress in the last year and set out areas for further action.

Last year I emphasised the importance of 'preventing the preventable'; and improving the safety of our services. The need to develop a sustainable health and social care system is never more obvious than in the ongoing growth of new treatments and technologies. To introduce these in an affordable way there must be a balanced drive to reduce preventable illness and improve quality of care. Generating evidence of what works is part of a good quality health service. The arrangements for research and development for health and social care were changed this year to improve focus on important causes of poor health in Wales. Increasingly, we must ensure that all patients are offered a chance to be involved in research.

I am pleased to see continued improvement in life expectancy. The pattern of chronic illness appears to be changing with some improvements. Of concern is the slow but steady rise in reported mental illness; it is important to ensure that physical and mental illness receive equal policy and service attention.

The Public Health (Wales) Bill has been laid and the draft Public Health (Minimum Price for Alcohol) (Wales) Bill has gone out for consultation, these provide an opportunity to make further progress on improving health. Specific areas of concern remain the continued harm from tobacco and alcohol. Despite encouraging signs of smoking rates decreasing to 20 per cent, the pattern of smoking remains strongly skewed towards the more disadvantaged communities. Action on obesity is essential and I welcome the Scientific Advisory Committee on Nutrition report on carbohydrates in the diet. This must be used to inform policy.

In terms of quality, the last report focused on primary and community services because these services are the foundation of an effective and efficient health system and I described the



Source: Welsh Government

major role they play in meeting the needs of our population. I also emphasised that these services will need to be further developed in order to respond to the opportunities and challenges ahead.

I am pleased that there has been substantial progress in the last 12 months. A new primary care plan and workforce plan, accompanied by substantial funding, will help to further develop a sustainable service that meets needs in local communities. Funding provided to support integration between NHS and social services will help to ensure holistic services for individuals too.

In the last 12 months, reviews have highlighted when care provided has fallen well below standard. The hospital 'spot check' process has provided assurance that this has been isolated practice. It is important that when poor practice happens that it is openly and transparently reviewed and action taken to improve. Safe and compassionate care for vulnerable people must remain the focus of our attention.



The Green paper on quality and governance provides an opportunity to consider what else might help to ensure consistent, high quality care.

In this year's report, and as part of a prudent health care approach which is gaining momentum, I have chosen to look at the two ends of life. Our health and life chances are inextricably linked. Having the best possible start from pregnancy onwards is essential to ensure healthy flourishing children and young people. The recent UK audit of maternal and child deaths highlighted that we must strive to improve outcomes for mothers and babies. Furthermore, the root to tackling poverty is to break the cycle of disadvantage by action in the early years. This must continue to be a strong focus for government if poverty, and the associated harm, is to be reduced.

At the other end of life, it is important that NHS and Social Services support people to make choices that give them the best quality of life in their later years. It is important that older people are able to live life independently for as long as possible. 'Ageing Well' is essential and it is never too late to adopt healthier lifestyles. At later stages of life, admission to hospital for a frail older person is not without its own inherent risks. The aim is to build primary and community services that can maintain care in a person's usual home. This requires active care planning, with patients and carers central to decision making and a focus on 24 hour services outside a hospital setting.

Protecting the public's health is important. I provide an update on sexual health and recommend a renewed strategy is developed. I describe the challenges of ensuring sustainable environmental health services, and the opportunity of further linking the public health system across the NHS and Local Government to support the ambition of the Well-being of Future Generations (Wales) Act 2015. The Ebola outbreak reminds us of the need to be vigilant to new threats. Our thanks go to colleagues who volunteered to help on the ground in West Africa

and those who ensured we had an effective response to possible cases should they arise in Wales.

Last year I ended the report with three main conclusions – on the need to focus relentlessly on prevention, quality of health care, and to bring closer together our efforts to reduce poor health and poverty. Progress has been made but action must continue to secure a healthier, happier and fairer Wales.



**Dr Ruth Hussey OBE,**  
**Chief Medical Officer, Wales**

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# Chapter 1

## Health, happiness and fairness

This chapter provides an overview on the health of people in Wales.



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### Population and life expectancy

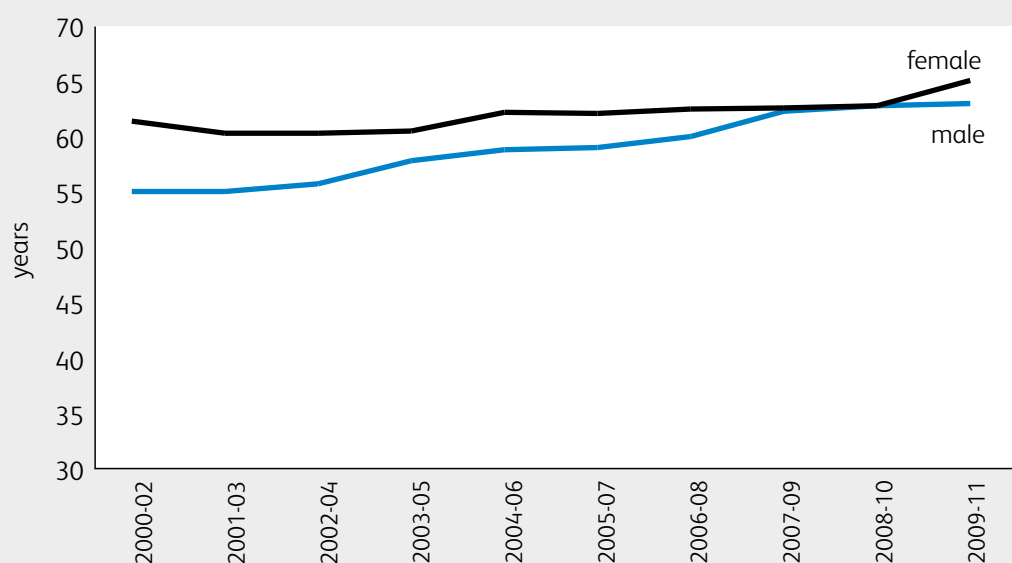
The population of Wales continues to grow, with around 3.1 million people in 2014<sup>1</sup>. Life expectancy rose to 78.3 years for males and 82.3 years for females in 2011-13<sup>2</sup> and shows continued improvement.

There has been recent interest in whether life expectancy is improving across all ages. A report<sup>3</sup> by Public Health England noted that female life expectancy at older ages in England fell in 2012, and was largely static for males. It also noted that annual fluctuations in life expectancy at older ages have occurred before and the overall trend over the last 30 years is upwards, and that it is too

soon to say whether these fluctuations represent a change in the overall trend. This is something that will be monitored as new data becomes available. Meanwhile, three year averages from the Office for National Statistics (which smooth out the fluctuations) do not show a decrease in life expectancy at age 65 for Wales or England.

Healthy life expectancy (that is, years in good general health) was 63.2 years for males and 65.3 years for females in 2009-11 – this is an increase of 8.1 years for males and 3.7 years for females since 2000-02<sup>4</sup> (figure 1). Life expectancy for females remains higher than males, but there is now little difference between them in healthy life expectancy.



**Figure 1: Healthy life expectancy, at birth in Wales, 2000-02 to 2009-11**

Source: Office for National Statistics

## General health & illnesses

Most adults report good general health – in the *Welsh Health Survey 2014*<sup>5</sup>, 81 per cent did so, and this has increased slowly over the last decade. At the same time, a third of adults (33 per cent) also reported that their daily activities were limited by a long-lasting health problem or disability, suggesting that although people may be limited in some way they may nevertheless still regard themselves as being in good general health.

Around half of adults reported currently being treated for certain conditions such as high blood

pressure, respiratory illness, arthritis, mental illness, heart condition or diabetes (figure 2). About a quarter reported being treated for two or more conditions, rising to half among those aged 65 and over (figure 3). This can impose a burden on individuals – in particular, those reporting multiple conditions were much less likely to report good general health (figure 4).

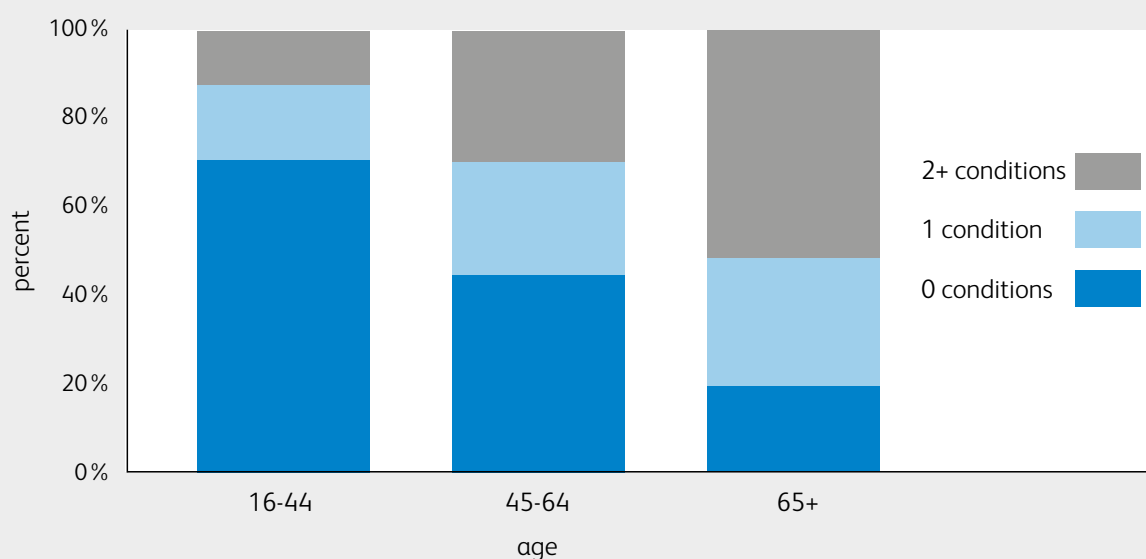
**Figure 2: Adults who reported currently being treated for certain conditions, 2014**

20%	High blood pressure
13%	Respiratory illness
12%	Arthritis
12%	Mental illness
9%	Heart condition
7%	Diabetes

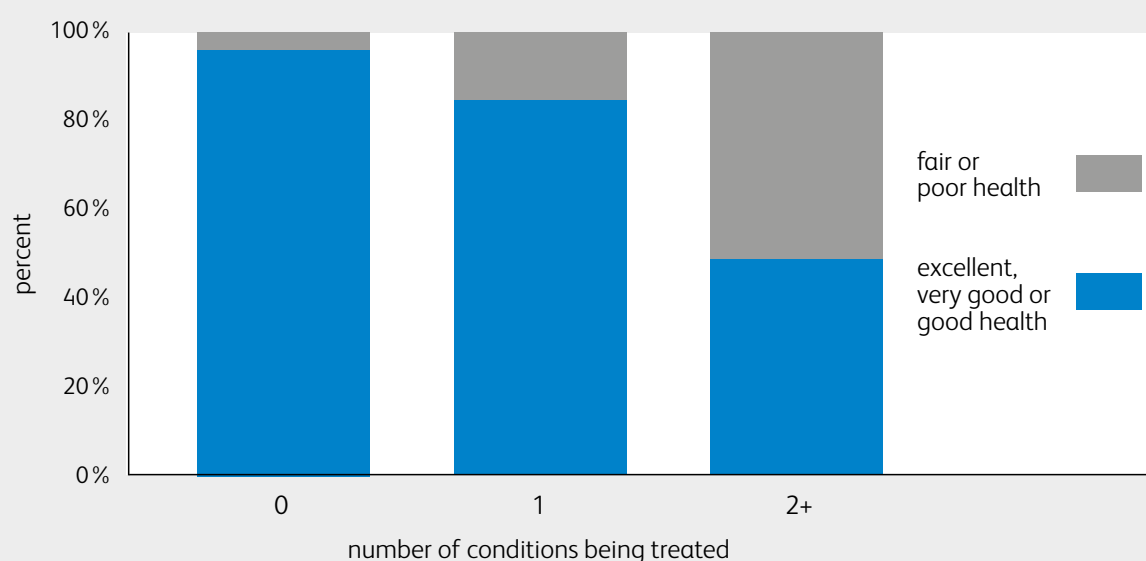


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Source: Welsh Health Survey

**Figure 3: Number of conditions treated, by age, 2014**

Source: Welsh Health Survey

**Figure 4: Adults' reported general health, by number of conditions treated, 2014**

Source: Welsh Health Survey

Overall, the percentage of adults being treated for at least one condition has increased slowly over the past decade. Conditions in which there has been some increase include diabetes and mental illness, while others (such as arthritis) have shown a slight decrease. At the same time, the percentage reporting good health has shown a slow increase. There may seem an apparent contradiction where levels of health conditions are increasing while at the same time good health is also increasing. It is hard to judge what lies behind this, although possible

factors could include a different mix of conditions (or different mix of severity of conditions) being treated, conditions being managed so they have less impact on people's assessment of their general health, different expectations of good health, or other factors. It should also be noted that these changes in levels of illness and general health are small and very gradual – year-on-year changes are not statistically significant and it is only over a longer timespan that changes can be detected.

## Health-risk behaviours among adults

Not smoking, not drinking too much, maintaining a healthy body weight, regular physical activity, and a balanced diet are all part of a healthy lifestyle. Not following these health behaviours increases the risk of illnesses and premature death. Illnesses for which these health behaviours are risk factors include heart disease, some types of cancer, stroke, diabetes, respiratory conditions, liver problems, musculoskeletal problems, mental health. As noted in last year's report<sup>6</sup>, the combined effect of poor health behaviours can be substantial, with the risk of mortality increasing as the number of poor health behaviours increases, however only a very small proportion of adults follow a truly healthy lifestyle. Harmful health behaviours remain common, with most adults reporting some adverse behaviour (figure 5).

**Figure 5: Adults reported health risk behaviours, 2014**

20%	Smoked
40%	Drank above daily guidelines the previous week
24%	Binge drank (twice daily guidelines) the previous week
68%	Ate fewer than five portions fruit & vegetables the previous day
69%	Physically active fewer than five days the previous week
34%	Not physically active any day the previous week
58%	Overweight or obese
22%	Obese

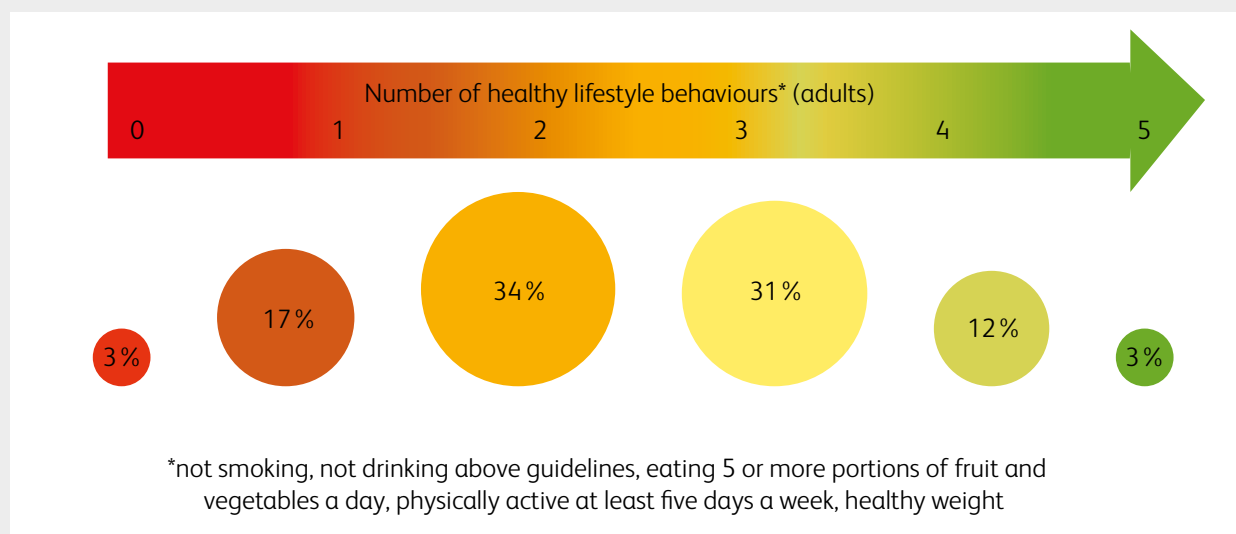
Source: Welsh Health Survey

Some improvements have been seen in recent years, for instance overall smoking rates have reduced, and there has been some decline in levels of drinking (among younger adults). Rates of overweight and obesity are higher than a decade ago but have not increased for the past two years, although it's too soon to judge if this represents a sustained levelling off of rates. But there has been little change in physical activity, and a slight decline in fruit and vegetable consumption. Data on levels of e-cigarette use among adults in Wales are not yet available but will be reported in future.

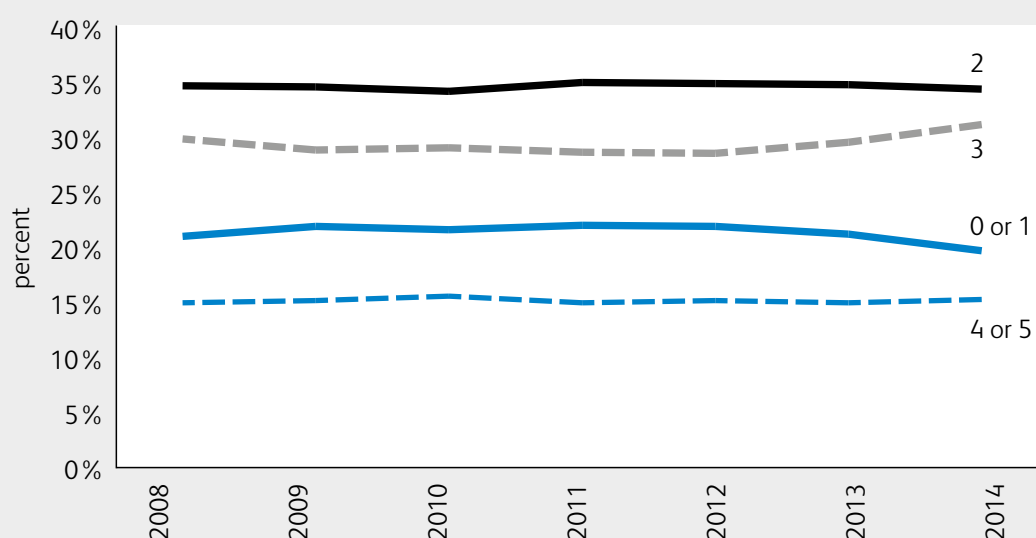
Previous reports have commented on the low uptake of truly healthy lifestyles. If we look at five key lifestyle factors (not smoking, not drinking above guidelines, eating five or more portions of fruit and vegetables a day, being physically active on at least five days a week, and maintaining a healthy weight), analysis of *Welsh Health Survey* data suggests that only three per cent of adults reported following all five healthy behaviours, while three per cent followed none. Most adults followed two or three healthy behaviours (figure 6). Behaviours tend to be slow to change over time, but there are signs of a slight fall in those reporting zero or one healthy behaviours since 2012, and a slight increase in those reporting three behaviours (figure 7). However, there has been little change in those reporting four or five healthy behaviours.



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**Figure 6: Number of healthy lifestyle behaviours**

Source: Welsh Health Survey 2014

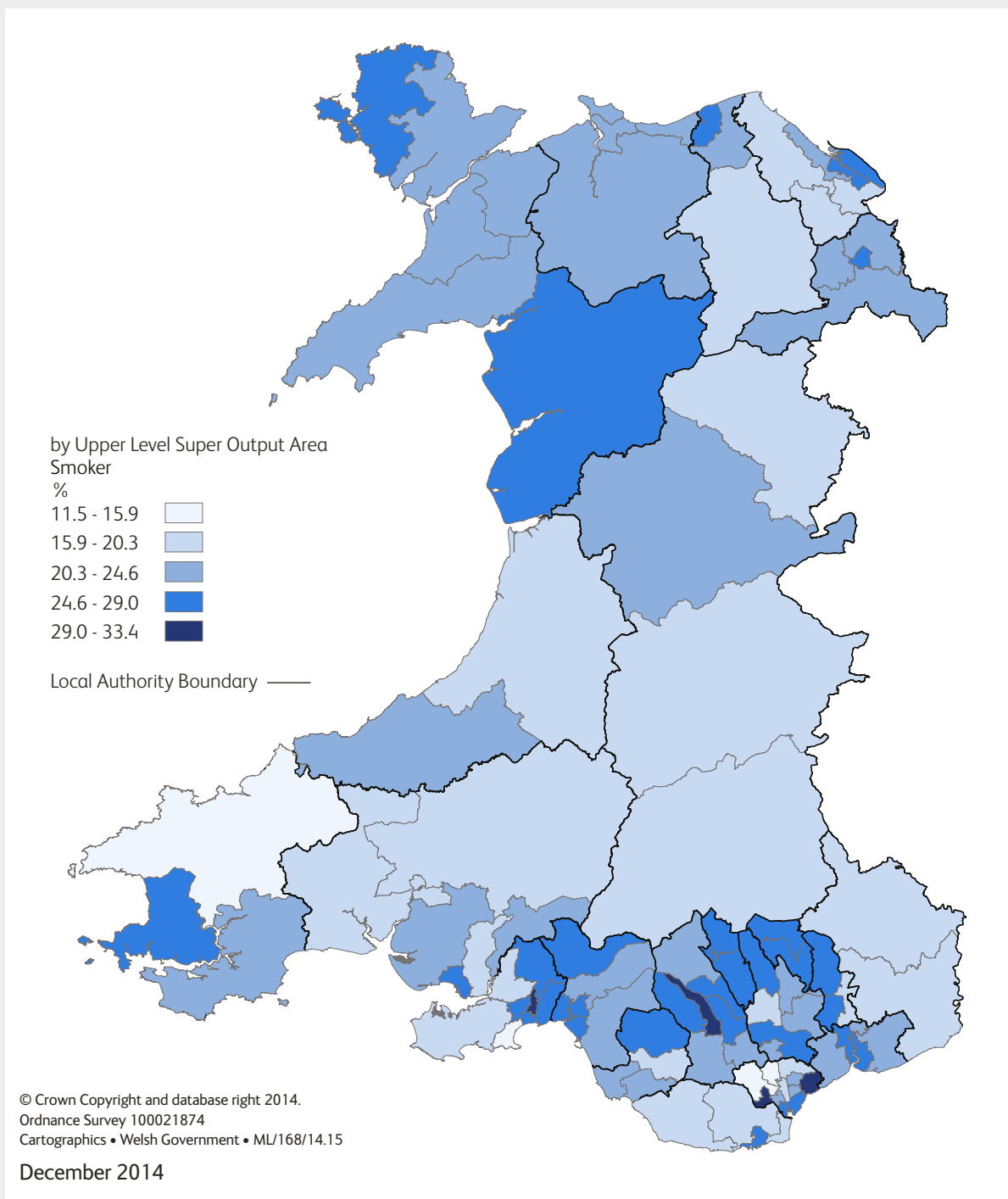
**Figure 7: Number of healthy behaviours reported by adults, 2008-2014**

Source: Welsh Health Survey

Levels of health-risk behaviour vary considerably across Wales. An analysis of *Welsh Health Survey* data for sub-local authority areas was published in January 2015<sup>7</sup> – this presented data for upper super output areas (USOAs), of which there are 94 in Wales. It showed high levels of variation both across Wales and within some local authorities. For instance, Swansea and Cardiff both had USOAs with some of the highest smoking rates in Wales (around 33 per cent) and some of the lowest (around 12-13 per cent) (figure 8). For the majority of the health

behaviour variables, some of the USOAs in South Wales fared the worst, with high levels of obesity, inactivity, smoking and alcohol consumption. However, there was considerable variation, with other USOAs within South Wales having some of the lowest levels. North Wales also showed some high rates. Mid and West Wales showed high levels of physical activity and fruit and vegetable consumption and generally scored better on all of the variables.



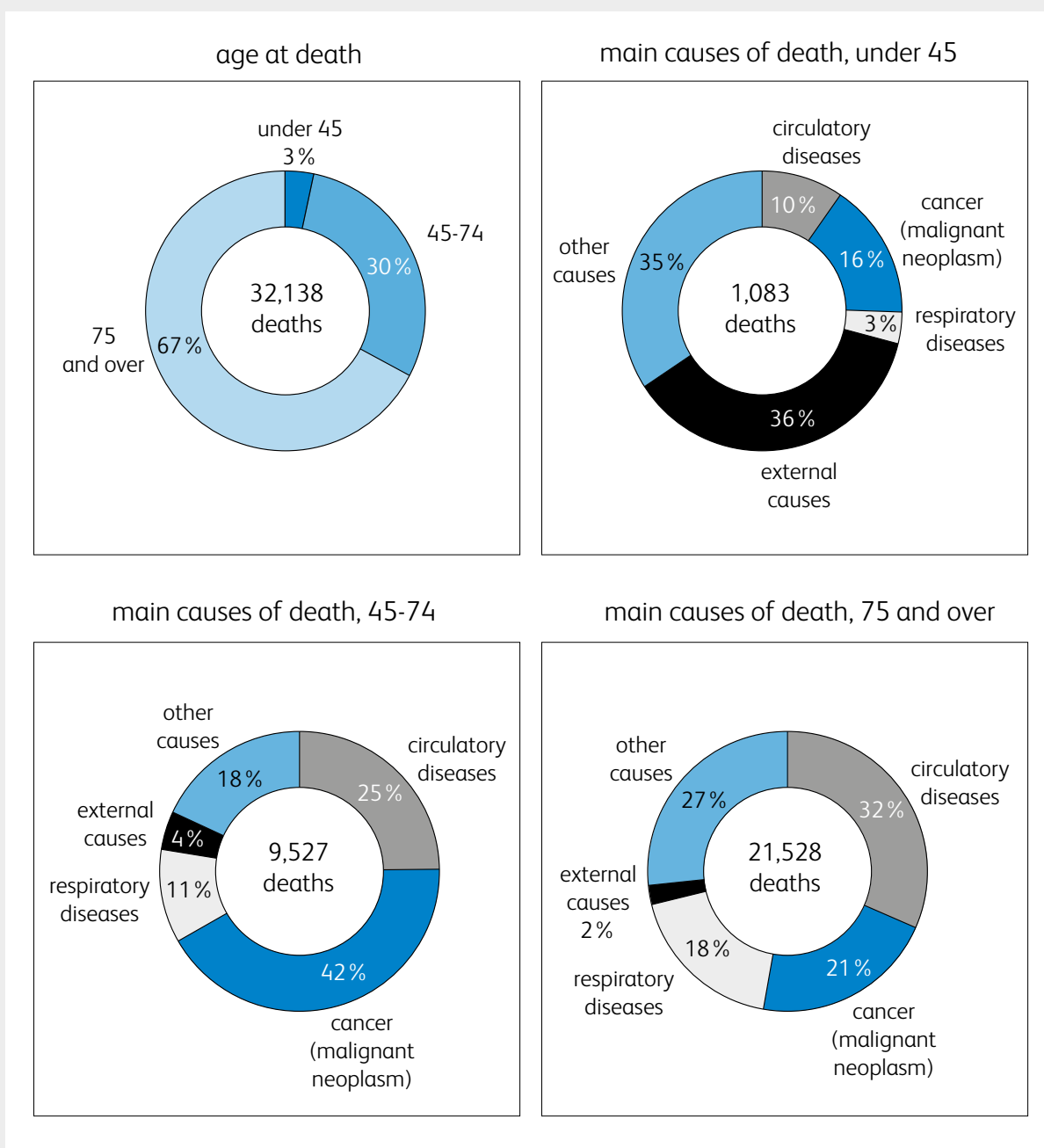
**Figure 8: Adults who reported being a current smoker (age-standardised)**

Source: Welsh Government

## Mortality

There were 32,138 deaths to Welsh residents in 2013<sup>8</sup>, with around two thirds of these in people aged 75 and over. The leading causes of death overall were circulatory diseases and cancer, together accounting for over half of all deaths, followed by respiratory diseases.

The pattern varied by age – among younger people (aged under 45), the leading cause of death was external factors (including suicide and accidents), among those aged 45-74 it was cancer, and among older people aged 75 and over it was circulatory diseases (figure 9).

**Figure 9: Main causes of death, by age group, 2013**

Source: Office for National Statistics

My report last year discussed ‘avoidable’ mortality – these are deaths from causes considered avoidable in the presence of timely and effective healthcare or public health interventions. Avoidable deaths can be divided into two subsets: ‘preventable’ deaths from causes considered preventable, and ‘amenable’ deaths from causes considered amenable to healthcare (with some causes classed as both preventable and amenable). In 2013 there were

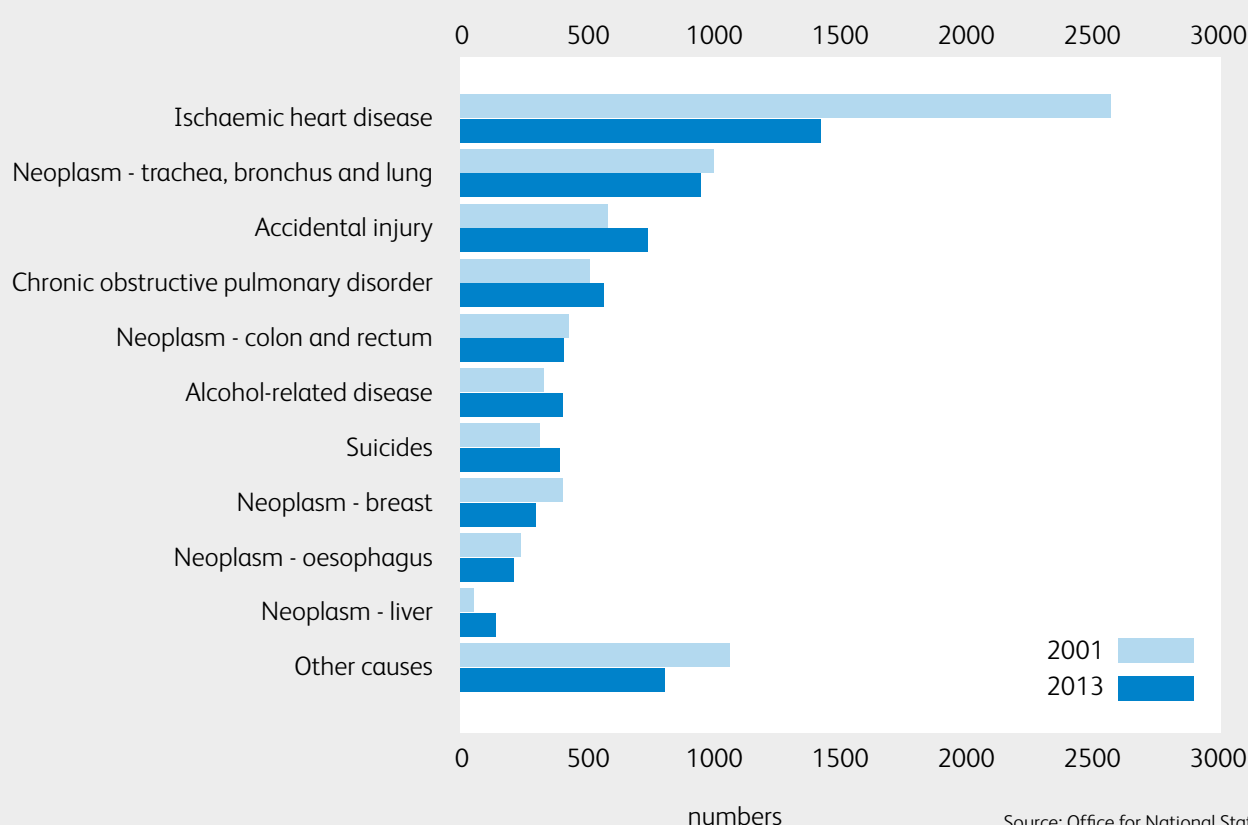
7,601 ‘avoidable’ death<sup>9</sup>, representing just under a quarter of all deaths. Between 2012 and 2013 there was a small increase (115) in the number of avoidable deaths, but the rate remained the same. The small increase was in those conditions classed as preventable – deaths amenable to healthcare continued to decline. Compared to other regions in England, the rate in Wales is slightly lower than that of the North East and the North West of England,

however that gap has closed somewhat since 2001 with greater reductions in those areas (albeit from a higher base. Figure 10 shows the main causes of preventable mortality – the leading causes are ischaemic heart disease, followed by lung cancer. Numbers of deaths from ischaemic heart disease have dropped sharply since 2001, and there have also been reductions in some other causes, but there have been increases in accidental injury, liver cancer, suicide, alcohol-related diseases, chronic obstructive pulmonary disorder) and little change for others.

Continued progress has been made in undertaking mortality reviews of all patients who die in our acute hospitals in Wales. An independent review during 2014 commended this approach<sup>10</sup> and its further

development. An audit undertaken in the 6 months to March 2014 NHS Wales demonstrated that over 4,000 mortality reviews had been completed. The audit also identified a number of key themes to where improvements in care could be made. The need for earlier identification and management of sepsis was one of the most common themes and considerable work has been progressed over the past year to address this supported by the 1000 Lives Improvement. Ways to improve end of life care, including decisions regarding resuscitation not being attempted were also a common source of learning. The new all-Wales Do Not Attempt Cardiopulmonary Resuscitation Policy being implemented during 2015 is a key improvement.

**Figure 10: Main causes of preventable mortality, 2001 and 2013**



## Liver Disease Delivery Plan

The *Chief Medical Officer's Annual Report 2011*<sup>11</sup> recognised standardised liver mortality in those under the age of 65 is rising at a disproportionately high rate compared with all other classes of disease. My 2012-13 Annual Report<sup>12</sup> recommended the

development of a liver plan to build on what has been achieved to date, improve the quality of services and reduce mortality from liver disease. This was followed in 2014 by a Lancet campaign, based on its report *Addressing Liver Disease in the UK*<sup>13</sup>, highlighting the need for the development of liver services.

As a result, the Welsh Government worked with clinicians from NHS Wales to develop a draft liver plan for consultation in November 2014. After considering the consultation contributions, the Welsh Government worked with NHS Wales and the Wales Association of Gastroenterology and Endoscopy to finalise the *Liver Disease Delivery Plan*<sup>14</sup>, which was launched on 5 May 2015.



The agreed Delivery Plan acts as a framework to improve liver disease services in Wales. It creates a national vision for how the service should look and interact with other services. It raises the profile of liver diseases services and ensures NHS Wales gives board-level consideration to how liver disease services should be delivered through their own Integrated Medium Term Plans. A national implementation group has been established and through the development of health board liver service plans, it aims to ensure NHS Wales and clinical leaders improve their services in line with national standards and outcomes.

The Delivery Plan follows the structure of existing delivery plans:

- Prevention
- Detection
- Fast and effective care
- Living with the condition
- Improving information
- Targeting research

Under the prevention theme, the plan includes the follow on work involved in the *Blood Borne Viral Hepatitis Action Plan 2010-2015*<sup>15</sup>, which came to an end in March 2015. The plan includes a number of population and NHS level outcome measures;

progress against which will form the basis of annual national and local reports.

The prevention chapter also links to much broader action covering obesity and alcohol misuse; with an understanding that the implementation group's activities must augment rather than duplicate work already underway in these areas.

Of specific concern is an increase in the number of deaths from suicide in recent years. Although there are a range of complex reasons the economic downturn is likely to be a factor. Men are much more likely than women to take their own lives. *Talk to Me 2* the revised strategy<sup>16</sup> and action plan for Wales which focusses on suicide and self-harm prevention was published in July 2015.

## Talk to Me 2

For the next five years the action plan for Wales focuses on a number of achievable objectives and priority actions. These are specific to suicide and self harm prevention and do not duplicate activity in other strategies, such as *Together for Mental Health*.



There are many risk factors for, and individuals and groups vulnerable to, suicide and self harm and there are many settings in which suicide prevention can be effectively delivered and in some areas, such as rural communities, there are distinct concerns for suicide prevention.

Talk to Me 2 has six key strategic objectives that will be taken forward over the lifetime of the strategy:

- Further improve awareness, knowledge and understanding of suicide and self harm amongst the public, individuals who frequently come in to contact with people at risk of suicide and self harm and professionals in Wales

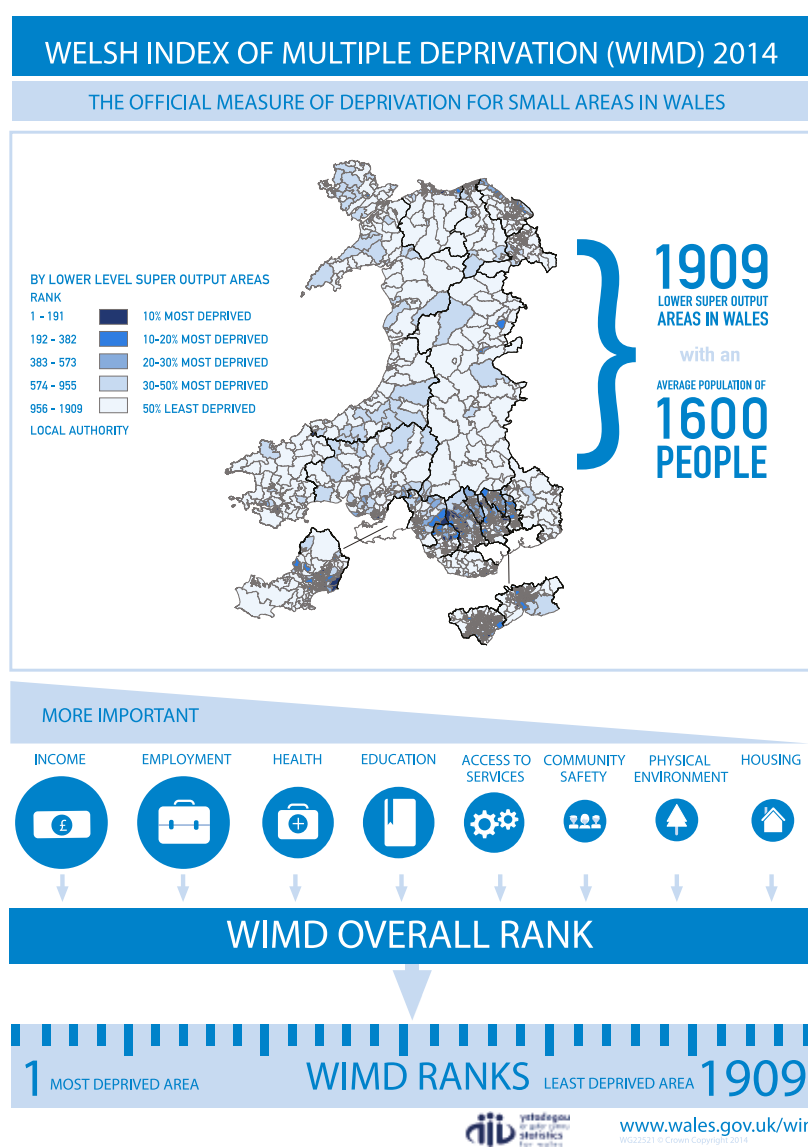


- To deliver appropriate responses to personal crises, early intervention and management of suicide and self harm
- Information and support for those bereaved or affected by suicide and self harm
- Support the media in responsible reporting and portrayal of suicide and suicidal behaviour
- Reduce access to the means of suicide
- Continue to promote and support learning, information and monitoring systems and research to improve our understanding of suicide and self harm in Wales and guide action

## Deprivation and health

Previous reports have referred to inequalities in health between those living in the most and least deprived areas. The Welsh Index of Multiple Deprivation (WIMD)<sup>17</sup> is the official measure of relative deprivation for small areas in Wales, and in November 2014 an updated version, WIMD 2014, was published (figure 11). In WIMD 2014, there were pockets of high relative deprivation in the south Wales valleys and large cities, and in some north Wales coastal and border towns.

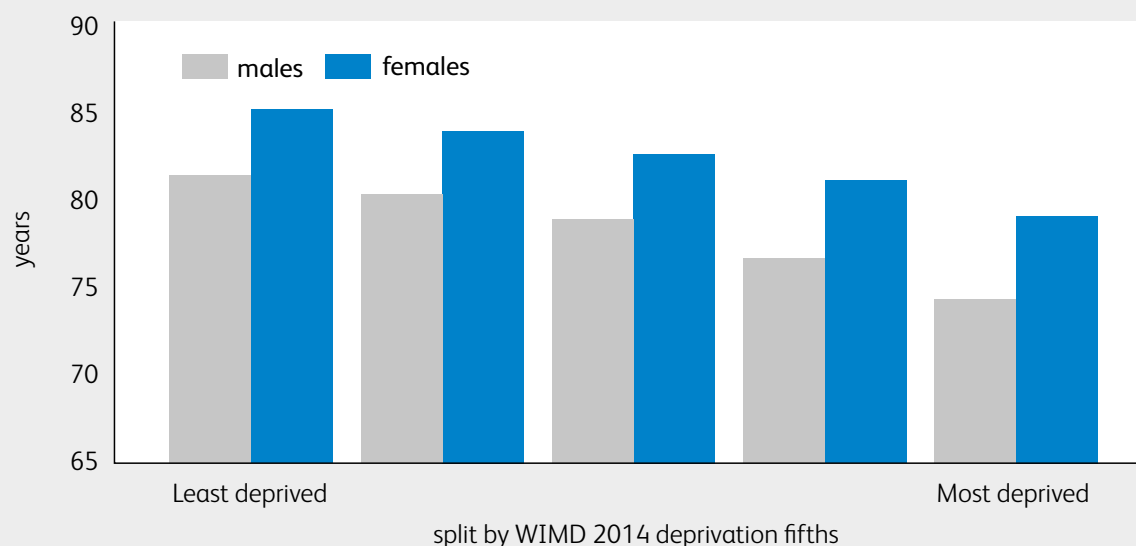
**Figure 11: Welsh Index of Multiple Deprivation (WIMD), 2014**



WIMD 2014 can be used to group small areas within Wales (lower super output areas, or LSOAs) into five equal groups ('fifths') according to their overall rank. An analysis of data on life expectancy and general

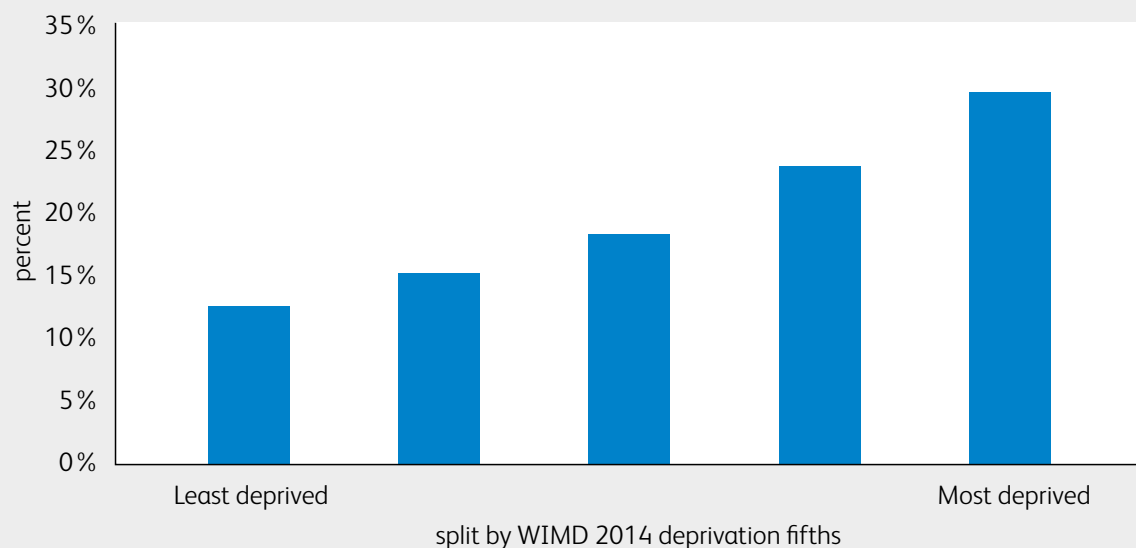
health by deprivation fifths is summarised in figures 12 and 13. This suggests that those living in the most deprived areas continue to have lower life expectancy and poorer general health.

**Figure 12: Life expectancy at birth**



Source: Office for National Statistics, with additional calculations by Welsh Government

**Figure 13: Fair or poor general health (adults)**

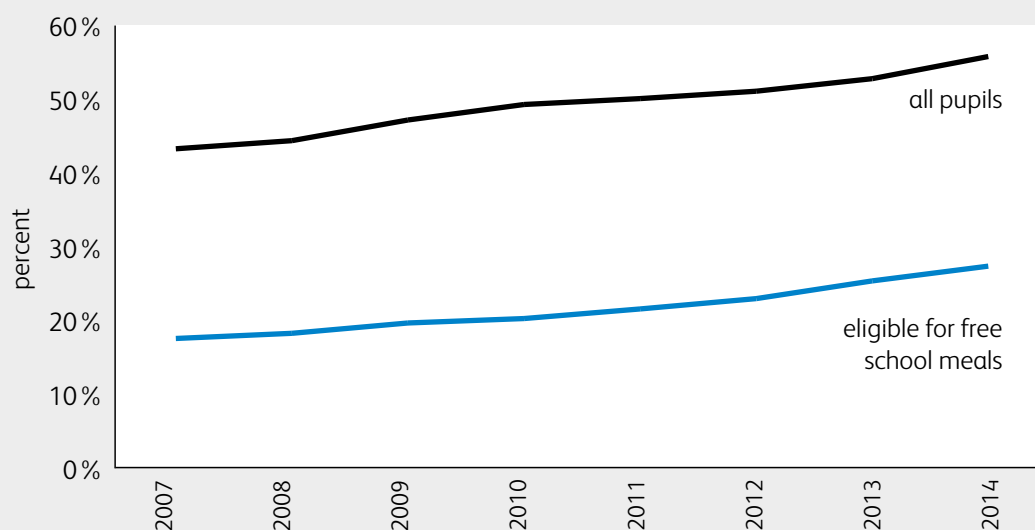


Source: Welsh Health Survey

The Marmot Review (Fair Society, Healthy Lives)<sup>18</sup> noted that health inequalities result from social inequalities, and that reducing them required action across all the social determinants of health. Examples of two such determinants (GCSE achievement, unemployment) are shown in figures 14 and 15. The percentage of 15 year olds

achieving five or more grade A\*-C GCSEs (including English / Welsh and maths) has increased, but remains much lower among those eligible for free school meals<sup>19</sup>. The unemployment rate showed a sharp increase in 2009, it then decreased during 2013 and 2014 but is still above the levels seen prior to the economic downturn<sup>20</sup>.

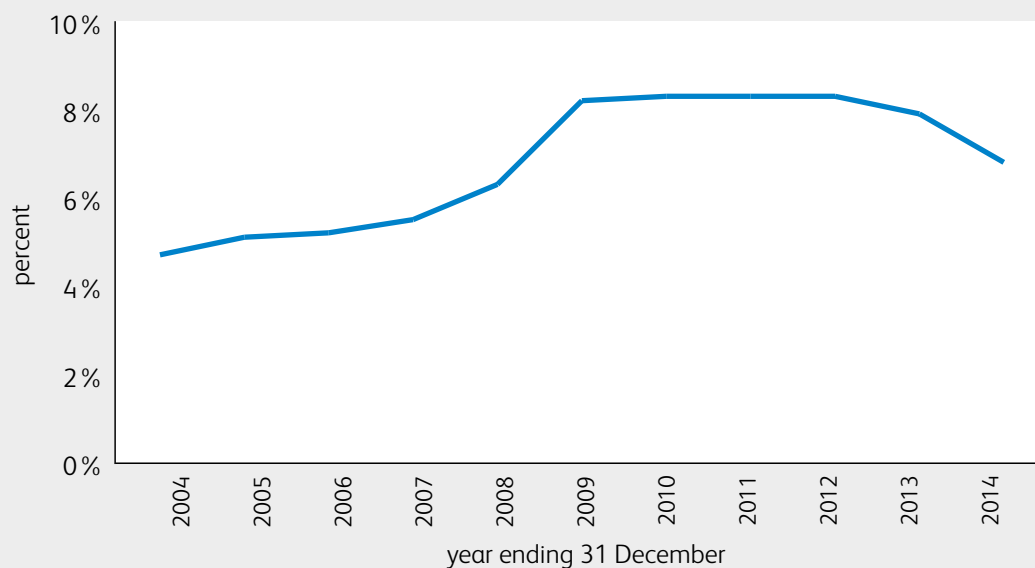
**Figure 14: Pupils aged 15 achieving level 2 threshold\* including English/Welsh and Mathematics, 2007-2014**



\* 5 or more grade A\*-C GCSEs

Source: Welsh Government SDR 01/2015

**Figure 15: Unemployment rate, aged 16 and over, 2004 -2014**



Source: Annual Population Survey / Labour Force Survey

Continued cross Government action on improving educational attainment and developing economic opportunity for all remain important priorities to reduce the social inequalities that underpin health and well being.

## Summary

Overall health continues to improve in Wales though our socio economic circumstances and unhealthy lifestyles continue to generate poor health; inequalities remain a concern. Rates of mental health and illness are areas to monitor in the short to medium term.

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# Chapter 2

## Prudent Healthcare



Source: 1000 Lives Improvement

### A growing movement

In my last report<sup>1</sup>, I briefly outlined how ‘prudent healthcare’ began in Wales with work led by the Minister for Health and Social Services and the Bevan Commission, an advisory body for Welsh healthcare. In the space of a few months it has moved from being just a debated topic to actually being used in our services for better patient care. It is to me a philosophy, or an approach that can be applied with benefit to almost any situation in health and healthcare in Wales.

Prudent healthcare is now a growing movement, putting Wales into a group of countries with a similar vision of high quality and cost effective healthcare, including Canada and Italy. It’s about using the resources of NHS Wales with careful thought as to what is appropriate to the needs of each individual, not always to do everything that

is technically possible as this cannot always match everyone’s hopes and expectations. New procedures and technologies can provide powerful benefit, but can also be complicated and risky, and often not the preference of the user. The NHS needs to introduce new discoveries quickly, where appropriate, while recognising simpler treatments can be just as good or better for many patients.

Prudent healthcare represents a move to emphasise more strongly the straightforward and effective work we do. We know that many chronic medical conditions can be prevented entirely by healthier lifestyles, so prudent healthcare requires everyone in Wales to work together to play their part to achieve a healthier Wales. Prudent healthcare also requires us to work harder to strengthen the primary care services that support millions of people through their difficult times and illnesses, shifting the emphasis of care from hospitals to community settings, working

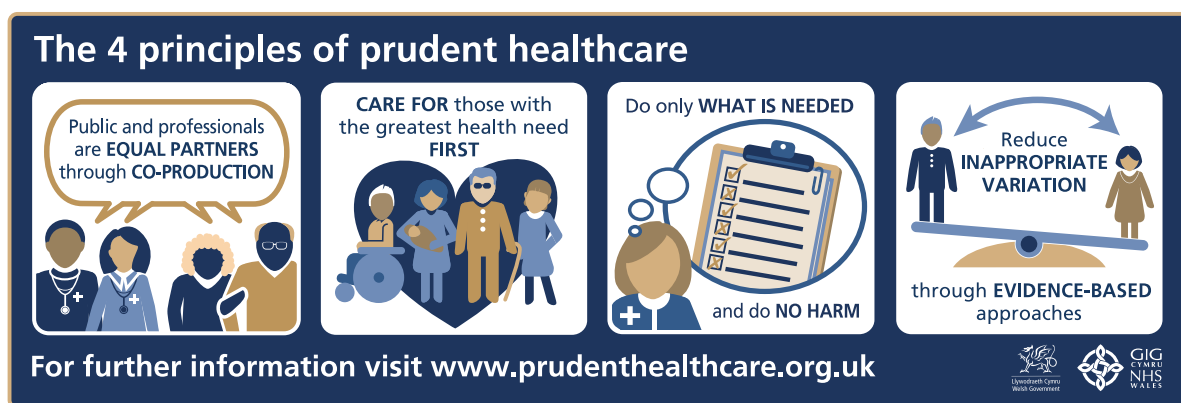
closely with other services that can help us lead healthier lives. It is also attracting interest across the public sector. In this context the term prudent health and care better describes the approach.

There are challenges for staff in a prudent healthcare system that requires a genuinely equal balance in decision making between the service user and the professional. The practitioner's role must be to provide full and understandable information so the individual can make their own decision in the knowledge of all that matters to them. A recent legal ruling, *Montgomery v. Lanarkshire Health Board*<sup>2</sup>, emphasised the importance of informed patient consent. The case ruled in favour of a mother who was not sufficiently informed about the possible risks to her baby during child birth. We are working

to ensure that where needed practitioners have access to the necessary tools to help with difficult discussions about risk and benefit.

We know that patients do better when they determine their own plan for care. Evidence gathered in recent years suggests we do more and more to people but their experience and the outcome does not always improve as a result. At the same time, we underprovide care in some circumstances, showing how we need to be more consistent in our advice and care if the best outcomes are to be achieved.

Twelve months on, prudent healthcare is starting to have an impact. The final principles were published in January 2015<sup>3</sup>.



When they are understood, the principles are met by increasing acceptance from public and patient groups, but I do not underestimate the continuing need for public dialogue. The idea that often to do less is to do better for people can be difficult to accept in a world where the benefits of every new technology and test are promoted.

Prudent healthcare is about achieving clinical excellence and not a passing fad. It embodies all I understand about what is great healthcare and provides a powerful framework for continuous improvement. The rest of this chapter features examples of how prudent healthcare provides a light for us to follow as we seek to improve care, with a focus on older people and a range of clinical services throughout Wales.

## Prudent healthcare for older people

Our ageing population is a success story in terms of modern medicine and public health, however, one of the consequences of this change in demography is that chronic conditions are becoming increasingly common so many older people are living in poor health. The 2014 *Welsh Health Survey*<sup>4</sup> shows that 50 per cent of adults (those aged 16+) reported being treated for at least one health condition (from those conditions covered by the survey) (see chapter one). It is here that prudent healthcare might help us to offer the right services to ensure people live the lives they wish.



Source: © Crown copyright (2014) Visit Wales

The Caerphilly study<sup>5</sup> has shown clearly how avoidance of unhealthy lifestyle behaviours prevents the development of chronic conditions including dementia and diabetes. The most prudent symbol of all must be a healthy ageing individual living independently. This powerful study suggests that concerted action across Welsh Government to improve lifestyles, mental wellbeing and independent living will bring substantial benefit.

The work is concentrated on:

- Age- friendly communities
- Falls prevention
- Dementia supportive communities
- Opportunities for learning and employment
- Loneliness and isolation

Wales' track record of innovative achievements in advancing the rights of older people has been recognised by the European Innovation Partnership on Active and Healthy Ageing (EIP-AHA), of which Ageing Well became a partner in 2012. The EIP-AHA is a partnership of regions and Member States from across the European Union working to increase the average healthy lifespan of EU citizens by two years by 2020. Wales' achievements in this area include:

- Strategy for Older People  
(a three phase strategy 2003-2023)
- Statutory Older People's Commissioner  
(a world first)
- Declaration of Rights for Older People
- Older people's Strategy Coordinators  
in Welsh Local Government
- Older People's Champions and 50+ Forums  
in all 22 local authorities

## Heneiddio'n Dda yng Nghymru Ageing Well in Wales

Rhaglen bartneriaeth ar gyfer gweithredu ar y cyd  
ar draws Cymru ac yn Ewrop  
.....  
A partnership programme for collaborative action  
across Wales and in Europe



## Ageing Well in Wales 2014-19

Hosted by the Older People's Commissioner for Wales, Ageing Well in Wales brings together individuals and communities with public, private and voluntary sectors to develop and promote innovative and practical Wales to make Wales a good place to grow older for everyone. The aim of the Ageing Well in Wales Programme is to ensure there is an improvement in the wellbeing of people aged 50+ in Wales.

This unique approach and the commitment to ensuring older people's issues have a high profile and are recognised across a broad range of policy areas at local and national level, and saw Wales awarded the highest 3\* Reference Site status by the European Commission in 2013. The Programme became part of the Reference Sites Collaborative Network, a network of over twenty regions and Member States across the EU to collaborate and exchange best practice examples and innovation in the field of active and healthy ageing.

There are many excellent schemes and initiatives taking place across Wales that address the five themes of Ageing Well in Wales. Ageing Well in Wales will focus on turning research into practice, ensuring actions taken over the next five years to achieve these outcomes are evidence based and have been proven to positively impact on the lives of older people in Wales.

## Healthcare for older people

The main users of acute NHS services are aged over 65. It is becoming increasingly apparent that an acute hospital setting is not automatically the 'right place' for older people to be when illness presents. Many of us have seen how an elderly relative who has hitherto coped well can quite abruptly become confused, agitated and disconcerted when in an unfamiliar environment. This is often seen on hospital admission. Indeed, the hospital setting can present a range of potential harms with consequences that are magnified for frail older people; these include infections, maintaining nutrition and hydration, confusion and physical risks including falls.

Typically, older people are more likely to stay in hospital for a long time, partly as a consequence of the need for rehabilitation brought on by admission and the presenting illness. Figure 16 below illustrates. As the population ages further the proportion of people in these age groups will increase and we must plan accordingly.

**Figure 16: Average length of stay in acute hospitals in Wales**

Age Group	Average Length of Stay (days)	% of Total Bed Days
65 and over	7.5	70.7 %
75 and over	8.6	53.8 %
85 and over	10.0	37.6 %
All Age Groups	4.5	14 July 2015

Excludes Mental Health Specialties Excludes Daycases

Source: CHKS and ePEDW (for Powys)

**Figure 17: Population Projections, Wales, 2012-2037**

Age Group	2012	2017	2022	2027	2032	2037
65-74	318	355	353	361	391	394
75-84	191	208	248	282	284	296
85+	77	86	101	122	158	188
All age 65+	586	649	702	766	833	878
All ages	3,074	3,132	3,193	3,248	3,291	3,321

Source: National Population Projections (2012-based), Office for National Statistics

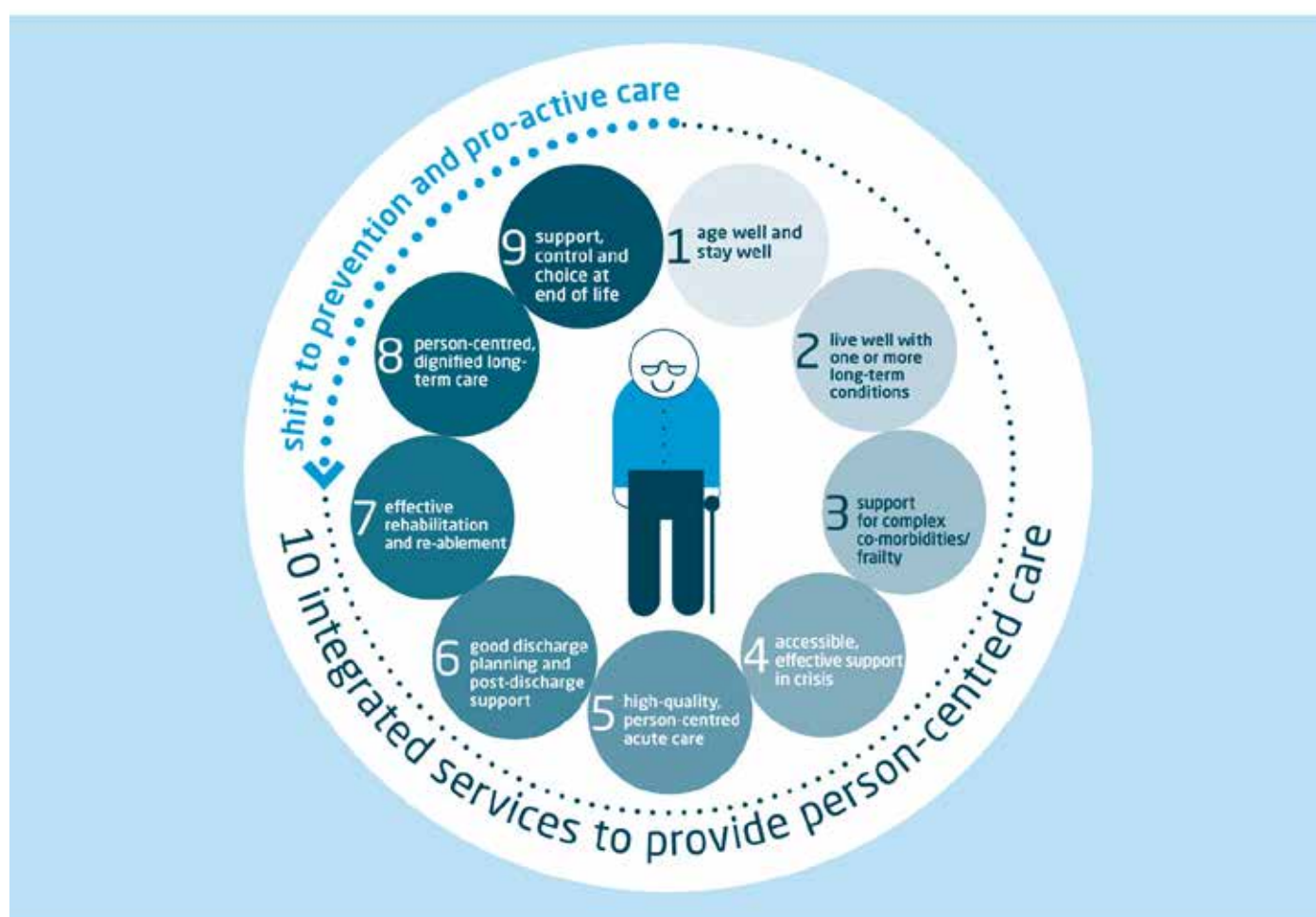


It is not uncommon to hear about individuals in hospital who lose their mobility and independence within a few days of admission. There is evidence that suggests bed rest in older people can lead to harms<sup>6</sup>. For example, we know that even in healthy adults, 10 days of bed rest can lead to a 14 per cent reduction in leg and hip muscle strength and a 12 per cent reduction in aerobic capacity; the equivalent of 10 years of life<sup>7</sup>. A prudent approach is one where hospital stays are kept to a minimum,

mobilising older people at the earliest opportunity is actively encouraged and efforts are focussed on returning people home to be cared for and supported to live well in their communities.

In its paper *Making our health and care systems fit for an ageing population*<sup>8</sup>, the King's Fund presents 10 components of care which together provide integrated person-centred services. Figure 18 illustrates.

**Figure 18**



Source: © The King's Fund

The components of care place the focus on the individual and their needs rather than the individual fitting into a complex and rigid health service structure. All components are interlinked and require health and social care teams to work in an integrated manner. Many of the multidisciplinary teams that have been developed in different parts of Wales to better meet the multiple needs of an ageing population provide good examples of prudent healthcare.

Medical diagnosis and treatments have improved hugely in recent years but have made the organisation of care for individuals with many complex needs more difficult. Our ability to diagnose has been increased by ever more sensitive investigations, consequently more people than ever before are considered to have ongoing medical needs, usually requiring multiple consultations and long lists of medicines. Our knowledge of how best to treat a range of specific conditions has

also been informed by evidence from many large randomised control trials. These are undoubtedly improvements but they have driven us towards ever-increasing specialisation, or compartmentalisation, of overall care. This problematic situation is now widely recognised within the medical profession. “The Shape of Training” review<sup>9</sup> published in 2013 argues for a change to our current specialist training arrangements towards a programme of training that ensures a greater proportion of more generally trained doctors, likely to provide more holistic care, in addition to those with particular specialist expertise.

The problem described is a particular challenge to ensure quality of care for the very elderly, who increasingly need attention for several clinical problems that all come together to threaten independent living, quality of life and wellbeing. Compartmentalised care increases the frequency of necessary visits to the general practitioner and potentially the number of hospital based specialists, resulting in a life often characterised by multiple appointments to our healthcare services. Not only is this an expensive way to provide care, but it can also be confusing and frightening and not ideal from the perspective of the individual who needs support.



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Multiple medicines prescribed for the older patient can be a concern. The average number of items dispensed per person increased by 40 per cent between 2004 and 2014<sup>10</sup>. Up to 50 per cent of medicines are not taken at all or not taken as prescribed and deliver no clinical benefit<sup>11</sup>. In fact, not taking a medicine may cause a deterioration of the underlying clinical condition and a readmission to hospital. Overall 6.5 per cent of hospital admissions are caused by largely avoidable adverse drug reactions (ADRs)<sup>12</sup>. A prudent healthcare system would be one in which the only medicines prescribed would be those adding the greatest

value, with a low cost and incidence of side effects and complications, and which the patient agrees to take. A sustained focus on high value prescribing and medicines management is needed.

Once in hospital, patients may be referred to multiple specialists and subject to a wide range of tests. The focus on diagnosis, tests and treatment means that occasionally services don't focus on the basic aspects of care most important to personal dignity – continence care, hydration, appropriate sedation and safe practice with the administration of medicines<sup>13</sup>. Much has been done to improve

the care provided, learning from the findings of spot checks undertaken on wards caring for frail older people and older people with mental health problems. At the heart of prudent healthcare is our need to design out unnecessary complexity that does not add value to the person receiving care in a way that will ultimately improve their experience of care. Fundamentally, it is our responsibility to remember the whole person, to put in place arrangements for integrated care and to have full and sensitive communication with patients and their families so all agree the best approach to caring for the individual, whilst being mindful of their wishes and circumstances and ensuring they have access to the right care without inappropriate age discrimination. I welcomed the statement from the *Future Hospitals Commission report* in 2013<sup>14</sup> that 'patient experience should be as important as clinical effectiveness' - a really 'prudent' statement. We must continue our ambition to improve care for older people.

In some cases, particularly for those nearing the end of long lives, supporting living with and managing a disease may provide a better quality of life than attempting curative treatment and coping with the effects of such invasive treatments. This is an important part of people enjoying the later years of their lives. Holding purposeful conversations with a

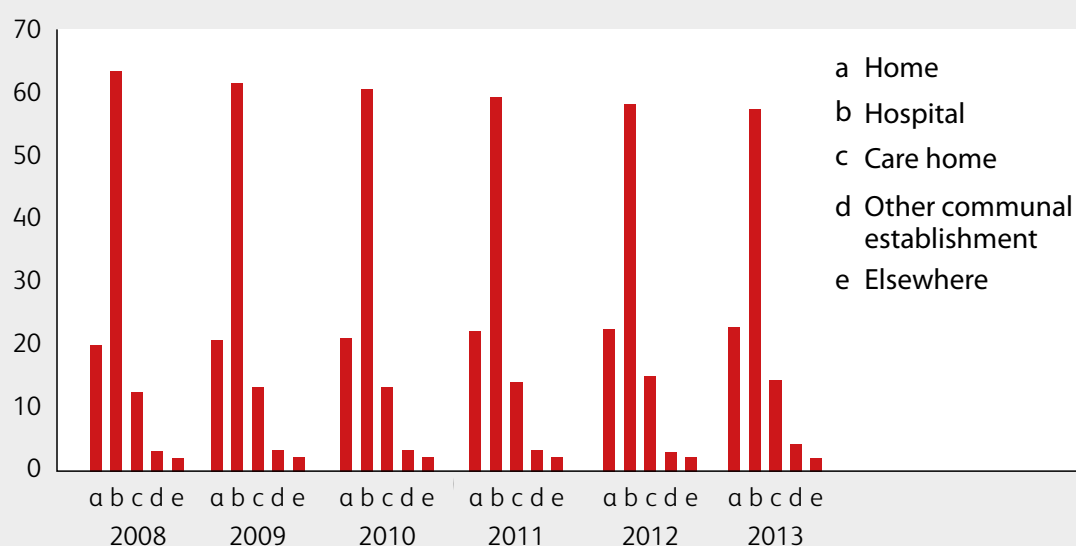
patient about their wishes and acceptable outcomes is skilful and requires training that I would like to become more readily available across professions. This trusted relationship is at the heart of prudent healthcare.

The End of Life Care Delivery Plan<sup>15</sup> sets out a vision that people in Wales have a healthy, realistic approach to dying, planning appropriately for the event. From our discussions with the public, we know that given the opportunity and right support, most people would prefer to die at home. Feedback we have received about palliative care services in Wales shows us the right services make an enormous difference to people's quality of life in their closing days.

The first End of Life Care annual report<sup>16</sup> published in 2014, shows that around 37 per cent of deaths in Wales occur in people's usual place of residence, either at home (23 per cent) or in a nursing/care home (14 per cent). 57 per cent of deaths occur in hospital and six per cent die elsewhere (including hospices).



**Figure 19: Percentage of deaths by place of occurrence**



Source: Office for National Statistics, 2014 (for 2008-12 data) and NWIS, 2014 (for 2013 data)

The Welsh Government has invested significantly in specialist palliative care services. This has meant that in Wales the NHS can provide advice to health professionals caring for patients wherever they live on a 24/7 basis, helping people to die in their place of choice. I would like to take this opportunity to acknowledge the invaluable care that is provided by the voluntary sector, particularly hospices across Wales. Their dedication has helped to provide more equitable and accessible services to our population.

As a society, we invest a lot of energy and time preparing for life's big milestones such as a forthcoming marriage or the birth of a child. However, culturally, we are more reluctant to prepare for our end of life - the most inevitable of all events. With around 32,000 people dying in Wales each year, it is important we encourage a move towards more openness to holding these conversations. Let's not leave it until times of crises to talk to our loved ones about their wishes. I want people to feel encouraged to do this at a timely point in their lives, not in the last months of life but in the healthy years beforehand. Byw Nawr (Live Now) was launched in 2014 to promote open conversations and to provide practical advice and support about end of life issues such as making a will, planning care and support, registering as an organ donor and recording funeral wishes.



Source: Byw Nawr

Byw Nawr is asking people in Wales to sign up to its volunteer database, encouraging communities to engage in conversations and activities that promote a healthy and realistic attitude to death and dying, planning in advance and leaving legacies for those left behind. The Byw Nawr website is being launched during Autumn 2015. I would encourage everyone to take the time to sign up to the campaign.

Wales is not the only country to be encouraging its nation to hold conversations about end of life planning. The importance of these discussions is gaining recognition across the globe. In the USA, the state of Massachusetts has taken end of life planning a step further. In December 2014, the state introduced regulations which required hospitals, skilled nursing facilities, health centres and assisted living facilities to provide information regarding end of life care options for adults with serious advancing illness who are in the last six months of life, or where it is determined a patient may benefit from palliative and hospice care services.

The information provided is intended to help and support patients and their families to have discussions and make informed decisions about health care choices which reflect each person's goals, values, wishes and needs. Conversations covering advanced care planning, palliative care, hospice care and treatment are promoted while illness is stable and symptoms manageable.

## Prudent healthcare making a difference

There are various ways to see the difference prudent healthcare is making to improve peoples' experiences of health services in Wales and how they are becoming healthier and happier. Clinical teams and organisations are advancing areas of work in a prudent way and demonstrating the difference they make. A few are listed here from a large number of potential examples.

The Renal Team at Morriston Hospital, in Swansea, is showing how a home nocturnal haemodialysis service improves the quality of life of renal dialysis patients while making more efficient use of resources. Nocturnal haemodialysis is undertaken by patients at home as they sleep, releasing them from many of the restrictions associated with hospital dialysis, including: strict fluid and dietary restrictions; multiple medicines and three visits a week to hospital. The dialysis process is more efficient, patients feel better and blood tests improve. Home nocturnal haemodialysis can also reduce the cost of treatment by two-thirds.



One patient described their experience as follows:

*"I have a three-year-old son and was finding it difficult because before this service I had to travel to the hospital for dialysis three times a week. Now I can have dialysis at home while I'm asleep, it means I'm there for my son, my partner can now do more work and I'm enrolling on a college course because I now have the time."*

Examples, and contributions and perspectives on prudent healthcare from clinical and public service leaders have been captured on the website [www.prudenthealthcare.org.uk](http://www.prudenthealthcare.org.uk).

In Llanelli, the care delivered to older people has been redesigned by a multi agency community resource team whose first priority is to support people to solve their own health and wellbeing issues in an informed manner, thus reducing demand on the service. The new guiding ethos and primary principle of the team is to *"only do what matters to the individual, rather than what's important to us..."* The service encourages individuals to participate in community activities be it a choir, a chapel, a group playing dominoes in the pub, local history groups or a café delivering meals. These activities provide people with real opportunities to integrate into communities and improve their quality of life. The service acknowledges the importance of building relationships so that people can feel empowered to live the lives they wish.

The results are impressive. This people centred approach has dramatically reduced all the following measures: the average time for inquiry resolution, the percentage of individuals returning into the healthcare system within 12 months, the number of new residential care placements, people needing meals on wheels services and complaints. There is now improved feedback on services.

## Only do what only you can do – Community Dental Services



Source: © Crown copyright (2014) Visit Wales

The General Dental Council now allows patients to directly access dental therapists and hygienists without seeing a dentist first and three Community Dental Services (CDS) in Wales have piloted such direct access. In Betsi Cadwaladr Health Board, dental therapists carry out check ups for children and a therapist in Hywel Dda Health Board sees children on the CDS waiting list. Therapists in Aneurin Bevan Health Board screen children as part of the Designed to Smile programme.



All three pilots have been acceptable to patients and freed up dentist time to care for those patients who need them. In Hywel Dda Health Board when the pilot began in December 2013 there were around 100 children waiting between four to six weeks to be seen. By the end of the pilot a year later no children had to wait for treatment. In Aneurin Bevan Health Board the pilot not only reduced the cost of screening, but also provided valuable flexibility in obtaining consent and receiving treatment. Other direct access programmes are now being tested

These examples echo the vision set out in *Our plan for a primary care service for Wales*<sup>17</sup>, launched in November 2014 and the *Primary Care Workforce Plan*<sup>18</sup> in July 2015. The primary care plan is a big step forward in articulating how health and care services in Wales are changing so that we can continue to meet the needs of our population, particularly our frail, older populations. The plan describes how a new primary care service for Wales will evolve by developing and increasing the primary care workforce to provide the majority of care close to peoples' homes, accelerating the transfer of services from the hospital to the community and improving the way people can access services. Key to achieving the vision of the plan is the development of primary care clusters across Wales. Clusters will become increasingly accountable for the health and wellbeing of their communities, by providing flexible services that can be tailored for individuals and better match the needs of communities.

## A prudent move towards a primary care led health service

A prudent approach to healthcare has strong support in the primary care community where it is recognised that

individuals are 'experts in their own lives' and need to be involved in decisions about their care.

Patients often have a long relationship with the GP team and their home circumstances and support networks are understood - ensuring that these important sources of support are used effectively.

With an ageing population and an increasing number of individuals dealing with multiple health conditions, primary care is playing an important role in ensuring that many sources of expert advice are brought together to create a care plan that works for the individual and reflects their wishes.

Further research will be needed to inform how best to support this approach – bringing together the different influences that might otherwise drive an over medicalised response.

The PRIME Centre Wales (Wales Centre for Primary and Emergency Care Research)<sup>19</sup> is leading on a wide variety of related research projects including a dedicated workstream for Patient Centred and Prudent Healthcare. This will develop Shared Decision Making and Decision Aids, support self-management and consider developments to improve health literacy and enable behaviour change.

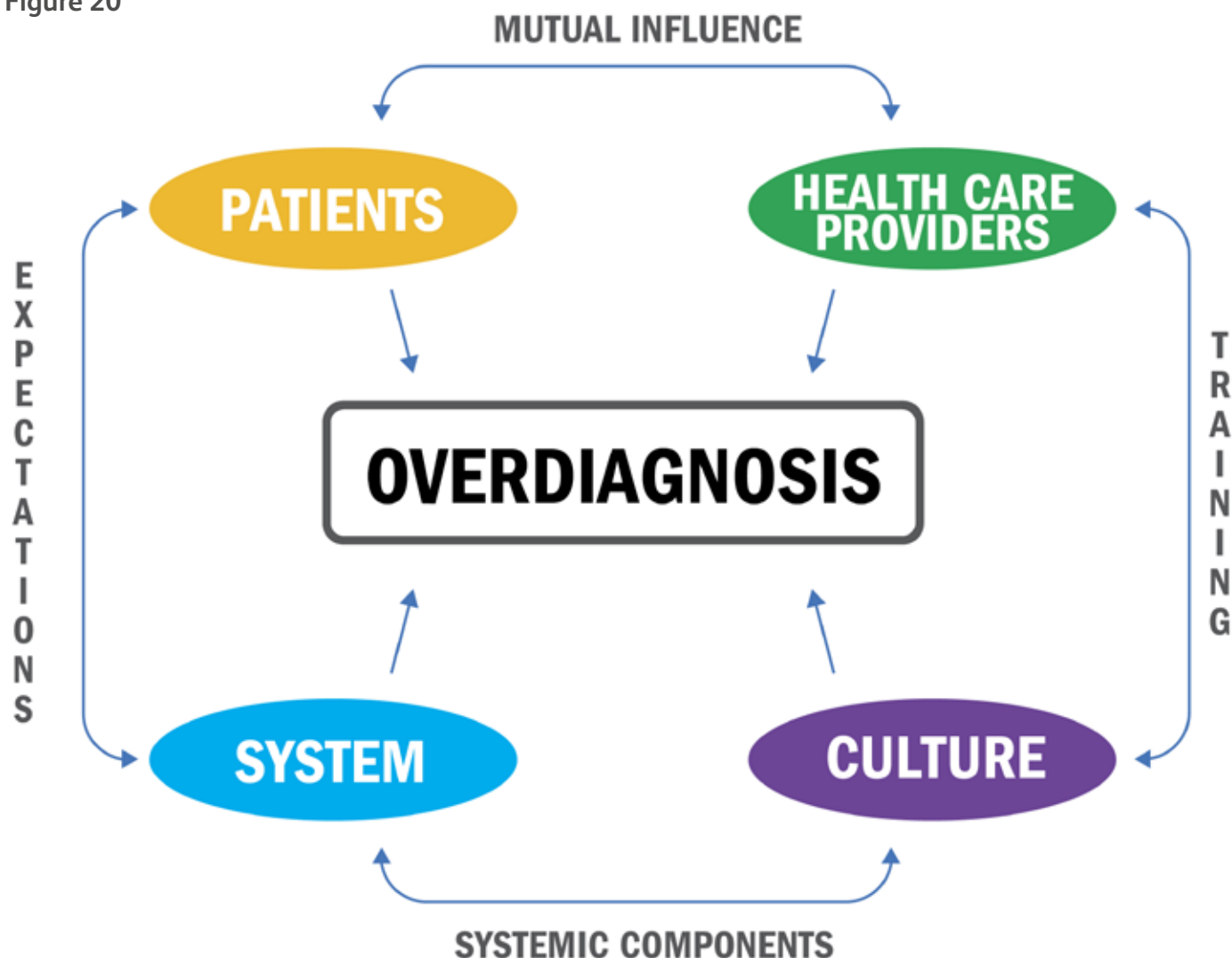
PRIME is one of five new research centres funded by the Welsh Government through Health and Care Research Wales – a multifaceted virtual organisation which supports and increases capacity in health and social care research and development in Wales.



## A prudent approach to screening

Screening is an important preventative health service. When delivered correctly, screening is an example of prudent healthcare – evidence based, avoiding over diagnosis and harm as much as possible, targeting those who need it most and providing the patient with all the facts so that they can make an informed choice about whether screening is right for them.

Figure 20



Source: Adapted by Québec Medical Association, from Parmar, M. and Parmar K., 2013, and published in Overdiagnosis: Findings and Action Plan, First Québec Symposium on Overdiagnosis report

The need for rigorous evidence for the implementation of new screening programmes is consistent with the principles of prudent healthcare, aiming to deliver healthcare that fits the needs and circumstances of patients and actively avoiding wasteful care that is not to their benefit. Screening is built around the principles that interventions which do harm or provide no clinical benefit are eliminated, and that treatment should begin with the basic proven tests and interventions. The UK National Screening Committee (UK NSC) advises all UK countries on screening matters and forms its recommendations based on principles similar to prudent healthcare.

Unfortunately, there are misconceptions about how screening works perpetuated by media stories and

high profile cases. Calls are made for more screening - for more diseases, in more people and for larger groups of the population. There's a widespread misunderstanding that screening people more would prevent disease, saving many more lives; and that screening programmes are only offered to certain age groups for financial reasons.

It is unfortunate whenever people are diagnosed with a disease, and it is only natural that they would wish it had been prevented or diagnosed sooner. It is important that health professionals and the public are aware of the facts so that misunderstandings about screening can be corrected and that the appropriate considerations can be made as to whether to take up the offer of screening.

### Screening facts:

- Screening rarely benefits all sections of the population which is why it is only offered to certain groups.
- It can have negative effects so it needs to be targeted at those most likely to benefit to avoid causing unnecessary harm.
- It can identify some of the people who have a disease but not all and it cannot prevent disease.
- Screening tests are different from diagnostic tests – they cannot give you a ‘yes’ or ‘no’ answer, only a ‘likelihood’ of having a disease. An ‘all clear’ does not mean you will not go on to develop the disease in the future.
- People with symptoms should not be screened, they require diagnostic tests.



Source: Sense About Science. Public guide to Making Sense of Screening guide can be found [www.senseaboutscience.org](http://www.senseaboutscience.org)



Routinely offered to women between the ages of 50 and 70. Over 117,000 women were screened for breast cancer in 2013/14. Nearly 1,235 cancers were diagnosed amongst women who were routinely invited. Wales has the highest breast cancer detection rate in the UK and was the first breast screening service to be fully digitalised.



**Cervical Screening Wales**  
**Sgrinio Serfigol Cymru**

Offered to women between the ages of 25 and 64. Over 210,000 women were screened in 2013/14. Approximately eight out of ten women attended their screening appointment when invited. 8,800 women were seen in colposcopy services and 2,400 had moderate or high risk cervical intraepithelial neoplasia (CIN 2/3) or worse diagnosed. CIN is a potentially premalignant transformation and abnormal growth (dysplasia) of squamous cells on the surface of the cervix which can develop into cervical cancer if not treated.

**Rhaglen Sgrinio**  
**Ymlediadau Aortig**  
**Abdomenol Cymru**



**Wales Abdominal**  
**Aortic Aneurysm**  
**Screening Programme**

Available to men 65 and over. Over 15,000 men were screened with a definitive result in 2013/14 and nearly 200 aneurysms were detected. Of these, six men were referred to the elective multidisciplinary team and the others were placed on surveillance.

**Bowel**  
**Screening**  
**Wales**



**Sgrinio**  
**Coluddion**  
**Cymru**

Tests are sent to men and women aged between 60 and 74. Over 161,500 test kits were validated in 2013/14. Around 2,500 had a further colonoscopy investigation and approximately 250 cancers were diagnosed.

## Sgrinio Cyn Geni Cymru Antenatal Screening Wales

Offered to all pregnant women. More than 17,000 pregnant women were screened for Down's syndrome during their pregnancy and over 560 were identified with a possible risk to their baby. Over 31,600 women were screened for Hepatitis B, syphilis, HIV and rubella susceptibility. Over 6,000 women were screened to identify carriers of sickle cell or thalassaemia genes.



## Newborn Bloodspot Screening Wales Sgrinio Smotyn Gwaed Newydd-anedig Cymru

Offered to all new parents for their newborn. The conditions screened for using the 'heel prick test' in 2013/14 were phenylketonuria (PKU), congenital hypothyroidism (CHT), sickle cell disease (SCD), cystic fibrosis (CF) and medium-chain acyl-CoA dehydrogenase deficiency (MCADD). Since January 2015, four more tests are included - homocystinuria (HCU), maple syrup urine disease (MSUD), glutaric aciduria type 1 (GA1) and isovaleric aciduria (IVA). In the year 2013/14, nearly 34,000 newborn babies were screened which is an uptake rate of over 99%.



## Newborn Hearing Screening Wales Sgrinio Clyw Babanod Cymru

Offered to all new parents for their newborn. Over 33,500 babies were screened for hearing loss, which is 99.4% of eligible births. Nearly 450 babies were referred for further investigation. Approximately 30 babies were diagnosed with a hearing loss by the programme in 2013/14.



## Gwasanaeth Sgrinio Retinopatheg Diabetig Cymru Diabetic Retinopathy Screening Service Wales

Offered to everyone diagnosed with Type 1 or Type 2 diabetes. Over 156,300 patients were eligible for the service, with over 13,800 new registrations in 2013/14. Of the 115,344 results reported from screenings during the year, 29.8% were found to have some degree of diabetic retinopathy. In 3.0% of cases, potential sight threatening retinopathy was found. 60.3% of patients screened with Type 1 diabetes were found to have some degree of diabetic retinopathy, compared with 27.9% of patients who had Type 2 diabetes.

## Are our systems of care working for patients?

If prudent healthcare is to make an important contribution to ensuring the NHS in Wales is able to meet the changing needs of people in sustainable ways, it needs to move quickly from being a set of principles and single examples to system wide change.

Steps are being taken to maintain the early momentum. The recent International Prudent Healthcare Summit demonstrated the commitment to prudent healthcare in Wales and secured international contributions to the movement. Five hundred people came together from a broad range of professions, and interests, to create a strong sense of purpose about the value of prudent healthcare. A number of developments were highlighted by the conference, including: the work NHS Wales is leading to apply the prudent healthcare principles in an additional six areas, covering respiratory, diabetes, eye care, primary care, cardiology, and oncology; and the Choosing Wisely Campaign being led by the Academy for Royal Colleges in Wales with Public Health Wales, which is seeking to reframe the discussions between clinician and patient to ensure the mutually agreed treatment pathways stand the best chance of achieving the intended outcomes.

By the time of the next Chief Medical Officer report, the Welsh Government and NHS Wales must have



gone further to ensure a system wide adoption of the prudent healthcare principles. There are two areas, both of which are unifying themes throughout my report, where further work is required.

## Measurement

The way in which the value of healthcare delivery is measured needs to be rebalanced. Rigorous, disciplined measurement and improvement of value is the best way to drive system progress. Yet current approaches are dominated by the structures and processes of care. For example, the medications prescribed, time spent waiting, or number of treatments performed. Whilst operationally useful, such measures tell you little about whether the best possible outcomes were secured for people and patients within the available resources. Prudent healthcare requires quality to be put at the heart of measurement systems, with a much sharper focus on outcomes, and stronger patient voice in assessing the effectiveness of care. This work is already underway through the following outcome frameworks: NHS<sup>20</sup>; Social Services & Wellbeing<sup>21</sup>; and Early Years<sup>22</sup>. A forthcoming Public Health outcome framework will complete the approach.

A value based approach to measurement must be characterised by looking at the whole cycle of care. How much do we know about whether patients can walk better six or 12 months after a hip replacement and are pain free? Do we understand whether a medication prescribed for depression has improved an individual's quality of life, family relationships, and their ability to work? Do we know how outcomes are changing over time? There are tools that can help in answering these questions, including Patient Reported Outcomes Measures (PROMs), though current uptake and utilisation across Wales is variable. The Welsh Government and NHS Wales should take proactive steps to develop measurement systems that will both embed the prudent healthcare principles and help capture progress over time.

## A public service approach

Prudent healthcare will not happen by the NHS working alone. Improving health and wellbeing will require action by a range of public services and, perhaps most

importantly, the intentions of prudent healthcare will need to be embraced by the public. The foundations for this approach are in place. I only have the opportunity to highlight a few examples but have provided further detail on each in other sections of this report.

The Social Services and Well-being (Wales) Act 2014<sup>23</sup> will transform the way social services are delivered, promoting people's independence and giving them stronger voice and control. The Act will support the advancement of the prudent healthcare principles, specifically through its focus on early intervention and prevention, integration, promoting equality, improving the quality of services and enhancing access to the provision of information people receive. With such intentions, perhaps there is a strong case for moving our thinking from prudent healthcare to prudent health and care

The goals of the recent Well-being for Future Generations (Wales) Act<sup>24</sup>, including the goal of a healthier population and the specific duties it may place on Public Bodies for joint population needs assessments, wellbeing plans, and public service boards, will also support the advancement of prudent healthcare. Organising around the prudent healthcare principles will require strong joint working arrangements between local public services and the Act provides a platform for this.

Finally, the Public Health (Wales) Bill<sup>25</sup> seeks to deliver the ambition to create an environment which promotes wellbeing, prevents ill health where possible, and advances the very prudent principle of providing people with new opportunities to look after and improve their own health.

## Recommendations

1. Prudent healthcare should form the basis of health strategy for NHS Wales for the foreseeable future.
2. Advanced care planning and timely end of life conversations become a natural part of the care and treatment plans agreed between patients, families, carers and health professionals.
3. A new approach to measuring health care should be developed, centred on outcomes and user experience, covering care at home as well as in hospital.



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# Chapter 3

## Giving every child the best start in life



Source: Welsh Government

The principles of prudent healthcare apply beyond NHS care. A prudent approach to public services is one where resources are invested wisely to meet current and future need, are focused on preventing problems arising or intervening early when they do, and draw on the best available evidence of what works to achieve specific aims.

The wealth of evidence making the case for investing well in the early years is now indisputable.

Wales has set out its intentions for future generations through the Well-being of Future Generations (Wales) Act<sup>1</sup>. Each child needs the best start in life if we are to achieve the aims of the Act and by achieving the goals we will all benefit.

### The case for investing in children

Rarely can a case be made so strongly - whether in economic terms, moral terms, or societal terms – than in the case for investing in children. A society which invests effectively in children is setting a strong foundation for current and future generations. Conversely, a society which fails its children is setting itself up for an intergenerational cycle of problems – a poorer economy, greater inequalities, poorer mental and physical health, less social cohesion and more costs – that will be very difficult to break out of.



Source: © Crown copyright (2014) Visit Wales

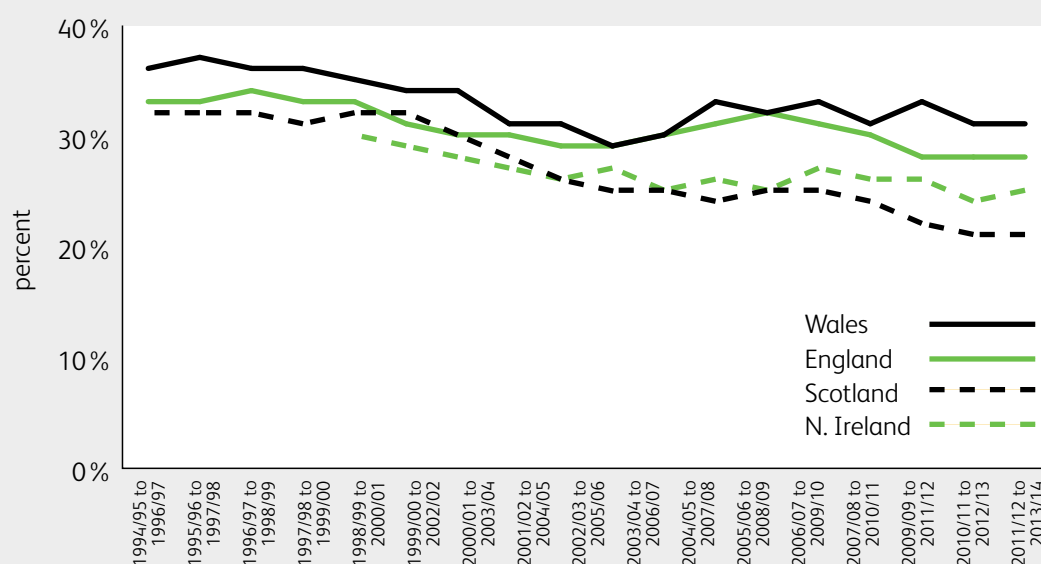
In Wales today, the proportion of our population aged over 65yrs has overtaken the proportion that is under 16yrs<sup>2</sup>. The increasing costs of supporting our ageing population points to the need for a robust economy and for our children to develop into engaged and productive citizens.

Having the chance of good health is not only a child's right but also an economic asset. It is linked to better educational outcomes and follows through to a more skilled and productive workforce. Good educational attainment also directly influences future health outcomes. This positive cycle can be

contrasted to what the evidence tells us about poor health as a mechanism for the intergenerational transmission of poverty.

Living in poverty is still the reality of life for too many children. Despite many families and parents doing an incredible job with little resource, it is often the case that children living in poverty have poorer health as children and poorer health outcomes as adults. This results in them having reduced earning capacity, leading to their own children being born into relative poverty.

**Figure 21: Percentage of children in Wales living in relative income poverty defined as below 60% of the median UK income after housing costs**



Source: Department of Work and Pensions (DWP)

There is a wealth of evidence on the importance of getting things right in “the first 1,000 days”<sup>3</sup>, and focusing on this period as a mechanism to break the link between poverty and poor life course outcomes. The period covers the time through pregnancy, birth, and up until a child’s second birthday. Every opportunity should be used to support women who are considering pregnancy or may be in early pregnancy. Information through routine community services can help to highlight the benefits of pre-pregnancy planning. Optimising the first 1000 days for each Welsh child – even, or especially, those born into poverty - means focusing on a healthy mother, a healthy pregnancy, and a healthy early childhood. During the first 1000 days a child’s brain develops rapidly (a baby’s brain grows from 25 per cent of its adult size at birth to about 75 per cent of its adult size by the end of second year<sup>4</sup>), a child’s environment influences their physical and emotional development, and there is opportunity for effective interventions that can influence a child’s health and wellbeing through to adulthood.

## Epigenetics

Evidence has been mounting especially from epigenetics research in the last decade about the importance of gene-environment interactions especially in pregnancy and childhood. Knowledge about how the wider environmental factors are ‘turning the genes on and off’, the new science of environmental epigenomics, is gaining wider influence. Evidence in mammals is showing that these gene switches (changes or markers) can be passed on to future generations and they can also be reversed. The reversibility of these gene markers gives health prevention a new and reinforced emphasis. There is increasing evidence that early life exposures of parents or ancestors can contribute biologically to developmental variation in the offspring when they affect pregnant mothers and children at pre-puberty.

Positive preventive actions in pregnancy will not only improve the health of pregnant women and their babies but also their babies’ babies as mothers act as ‘the incubators of future generations’. So a multigenerational perspective to public health

research, practice and policy is very important. It has never been so clear that to ensure a better future health for our children, grandchildren and future generations we should give children our priorities in everything we do today. Also, positive preventive actions during child development from before birth, in nurseries and schools are the most important and cost effective ways to intervene and prevent diseases in this generation as well as influencing future generations by the same actions.

## The role of Adverse Childhood Experiences

The first 1000 days are not only when crucial brain connections are formed, but also when the bonds between children and their care-givers are best formed, providing the foundation for developing cognitive skills, social skills and resilience. However, not all children have the best start in life. Exposure to adversity is common and its consequences for wellbeing are of major public health relevance. The more Adverse Childhood Experiences (ACEs) a child suffers, the greater the risk of them: adopting health harming behaviours; developing mental and physical disorders; and ultimately both prematurely and disproportionately contributing to the global burden of disease<sup>5,6,7,8</sup>. The impact of adversity throughout the lifespan, including on healthy ageing and the presentation with mental conditions and disorders in older age, is increasingly recognised<sup>9</sup>.

### Adverse childhood events can include any of the following:

- directly suffering physical, sexual or emotional abuse
- directly suffering emotional or physical neglect as a child, including being undernourished or dirty
- growing up in a household with domestic violence
- parental separation
- having a family member with a substance misuse problem
- having a family member having been incarcerated
- mental illness within the family.





Source: iStock.com/Yarinca

Those exposed to adversity during childhood are more likely to perform poorly at school, more likely to develop anti-social and criminal behaviour, and are more vulnerable to the development of mental health difficulties if also exposed to adversity in adult life<sup>10</sup>. The prevalence of a range of mental and physical complaints has been associated with adversity (e.g. cardiovascular disease<sup>11</sup>, cognitive deficits<sup>12</sup>, depression<sup>13</sup>, post traumatic stress disorder<sup>14</sup> and substance misuse/dependence<sup>15</sup>). The same is true for dysfunctional behaviour<sup>16</sup>, unhealthy lifestyles (e.g. exercise, diet) and working habits. The proportionate and often profound relationship between adversity across the lifespan, disease burden, and healthcare costs decades later can partly be explained by behavioural factors. Important health risks that are strongly related to early adversity include the use of tobacco and alcohol, as well as eating behaviours that might reduce distress in the short term, but contribute to the leading causes of ill health later in life<sup>17</sup>. The respective relationships seem to be moderated by further behavioural and social factors, e.g. social withdrawal, and the perceived quality of social networks<sup>18, 19</sup>.

### **Adverse Childhood Experiences (ACEs) in Wales and the impact on health in adults**

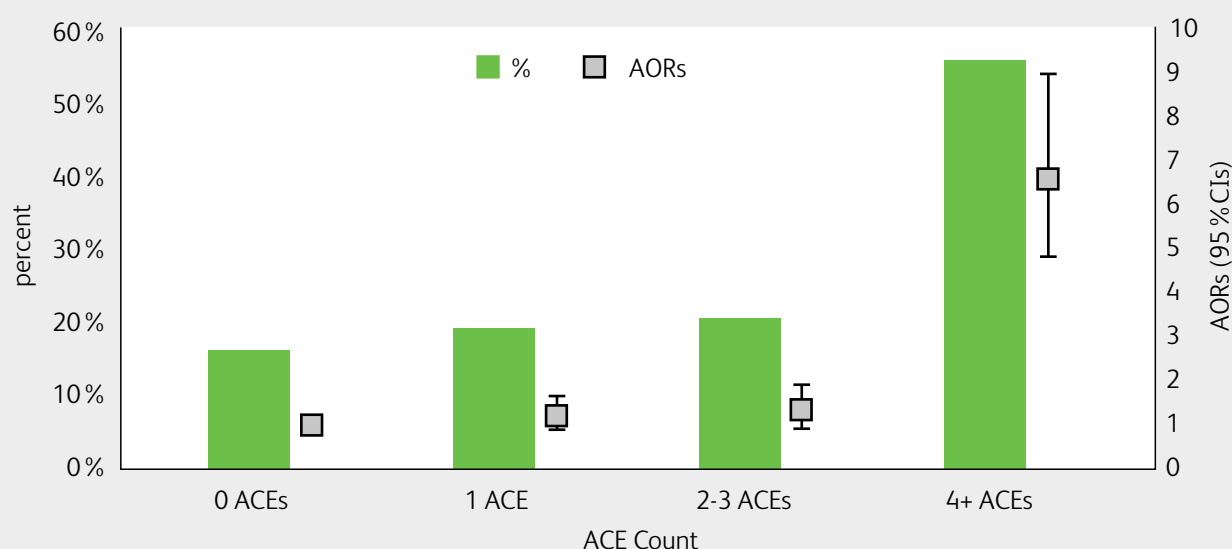
Recently, Public Health Wales has completed the first national survey of ACEs and their health impacts in Wales. The results of the survey of over 2000 Welsh residents will be published later in 2015. Below is an example of the association between levels of ACEs experienced by individuals as children in Wales and the current (adults) smoking behaviour.

#### **Currently Smoking Tobacco: Percentage and Adjusted Odds Ratio (AOR) by ACE count**

Over half of individuals exposed to four or more ACEs currently smoked compared to around 20 per cent of those who experienced between one and three ACEs and 16 per cent of individuals who experienced none. Even after age, sex, ethnicity, and levels of deprivation have been taken into account, those who had experienced four or more ACEs as children had odds of being a current smoker over six times higher than those whose childhoods contain no ACEs (figure 22).



**Figure 22: Currently smoking tobacco: Percentage and Adjusted Odds Ratio (AOR) by ACE count**



Source: Public Health Wales

Children exposed to adversity, through no fault of their own, are often deprived of the vital learning opportunities required to develop the skills needed to maintain relationships, deal with emotions, and cope with the challenges of life. Good enough parenting or care giving provides children with the ability to name and cope with feelings. Abuse or neglect often promotes overwhelming emotional arousal, often in a family context of little soothing or guidance, with exposure to maladaptive coping skills such as “sweeping things under the carpet”, heavy drinking or extreme anger. Models for dealing with relationships are also formed early in life in the context of relationships with primary caregivers and provide a template for how relationships work. Children quickly learn behaviours associated with establishing and maintaining connections to their caregivers, which can lead to self-fulfilling prophecies in later life. For example, adults who experienced adversity during their childhoods might expect to be routinely rejected by others in relationships and, therefore, maintain distance and avoid intimacy.

Neurobiological research suggests that childhood maltreatment may lead to altered glucocorticoid signalling and immune imbalance, interfering with key brain neurotransmitter pathways associated with depression and increased risk of cardiovascular and other physical and mental health diseases<sup>20</sup>.

Epidemiologic research suggests health impact from exposure to adverse life events, which might only become apparent decades after the exposure<sup>21</sup>.

## Action to achieve best health and wellbeing for our children

There is evidence to inform a wealth of actions that can help mothers and babies have the best start in life. These range from preventing domestic violence and maltreatment to providing effective health services. Wales has taken steps to address domestic violence.

The Violence against Women, Domestic Abuse and Sexual Violence (Wales) Act 2015 became law on 29 April 2015, seeking to raise the profile of the issues and providing a strong strategic direction, promoting consistency and best practice and ensuring ownership of the issues at a strategic level with the appointment of a Ministerial adviser.

## Partnership working between the Police and Primary Care

Not all clinicians have training about domestic violence, and may fail to identify patients experiencing abuse, and are uncertain about how to deal with known cases of abuse.

The South Wales Police and Crime Commissioner's team and GPs in South Wales have been working in partnership to improve awareness and training, enhance local knowledge of pathways, and improve support available to victims of domestic violence.

## Universal services – the role of the health service

The essential building block of a prudent approach to health services in early years is the universal adoption of effective preventive services. Whilst mothers to be can do much to prepare themselves before and during pregnancy by adopting healthy lifestyles, preventive services have a specific role to play.

### An effective approach includes:

1. Pre-pregnancy advice clearly signposted
2. Good antenatal services
3. Universal healthy child surveillance programmes
4. Universal assessment and support for good attunement between parent and baby
5. Prevention of child maltreatment
6. Universal early identification of need for extra support where problems arise such as good specialised perinatal mental health services

Underpinning these approaches are effective parenting programmes, child care support and education, focused on building the resilience of Wales' children. While this requires concentrated investment in the early years (birth to age five), continued benefits can also accrue from further investments from ages five to ten with schools playing a key role in ensuring all children develop protective factors such as basic literacy skills and positive peer relationships. It is particularly encouraging that the Professor Donaldson review ('Successful Futures') positioned the supporting of children and young people to be "*healthy, confident individuals, ready to lead fulfilling lives as valued members of society*", as one of four key purposes of a new curriculum. Welsh Government accepted the review's recommendations in full.

## Successful Futures

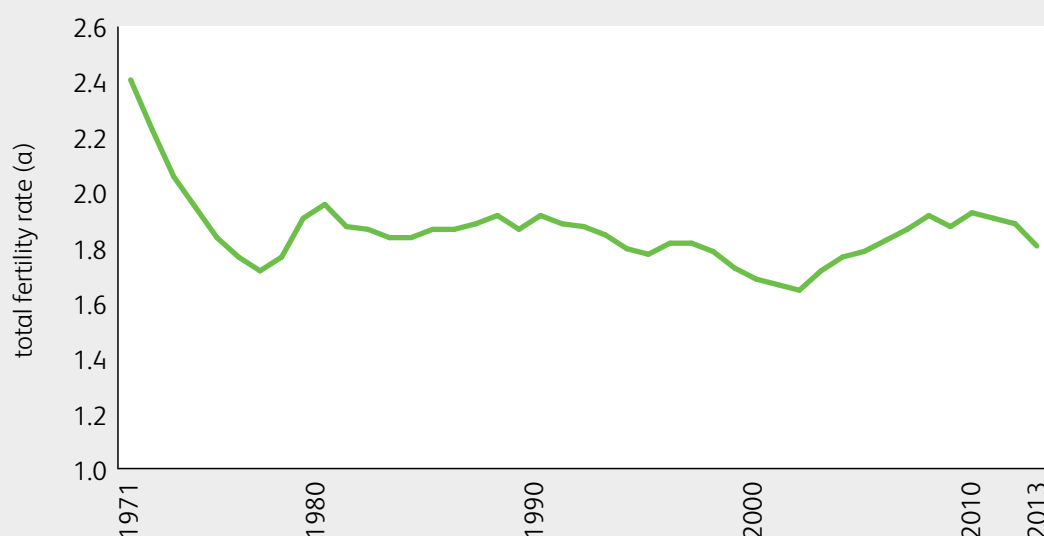
Successful Futures – Professor Graham Donaldson's wide-ranging review of the National Curriculum and assessment arrangements in Wales - was published in February 2015. Professor Donaldson sets out four key purposes for school education, together with a new framework for organising the curriculum. He identifies six areas of learning and experience as a means to combine subjects and other important aspects of learning to encourage connections and opportunities to apply learning in new ways.

The report recommends that the entirety of the school curriculum should be designed to help all children and young people to become:

- ambitious, capable learners, ready to learn throughout their lives;
- enterprising, creative contributors, ready to play a full part in life and work;
- ethical, informed citizens of Wales and the world; and
- healthy, confident individuals, ready to lead fulfilling lives as valued members of society.

## Before Pregnancy

Universal approaches to improving the health of women who are likely to become pregnant will contribute to improved outcomes for mothers and babies. These approaches can include integrating assessment of a woman's reproductive risks into her routine healthcare to reduce unintended pregnancy and improve preconception health. Any pre-conception assessment should include a focus on optimum weight and diet, adequate folic acid intake, immunisation status, smoking cessation, education about the harms of alcohol, risk reduction for women with substance use, and glucose control for women with diabetes. Contacts with parents and carers-to-be during this period should be considered opportune moments to improve understanding of the impacts of stressors on the life of babies and of the lifelong benefits of introducing key resilience factors.

**Figure 23: Total Fertility Rate for Wales, 1971-2013**

(a) The Total Fertility Rate (TFR) is the average number of children that would be born to a woman if the female population experienced the age specific fertility rates of the calendar year in question throughout their childbearing lifespan. The TFR is a summary measure of current fertility.

Source: Office for National Statistics (ONS)

## Antenatal



Source: Source: © Crown copyright (2014) Visit Wales

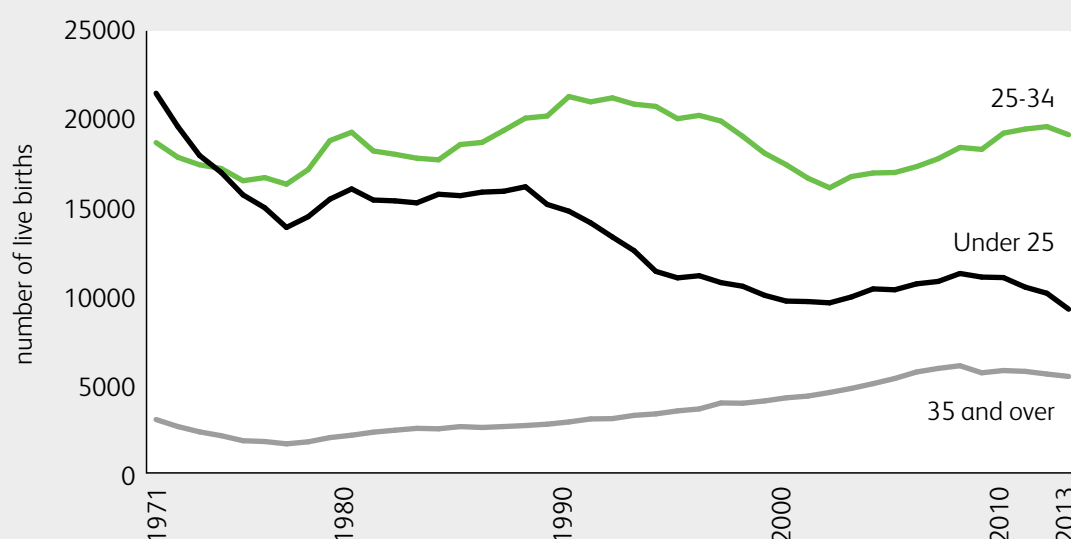
The antenatal and perinatal period includes the time from conception through pregnancy to birth, and the first 7 days of life; an extended perinatal period including the first 28 days of life is also defined. Inequalities in perinatal outcomes persist in the UK.

Pregnancies to women living in areas with the highest levels of social deprivation in the UK are over 50 per cent more likely to end in stillbirth or neonatal death<sup>22</sup>. In 2013, the stillbirth rate in Wales, adjusted by MBRRACE (Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries in the UK) to take account of factors known to affect the risk of perinatal mortality, was 3.78 per 1,000 births, with an extended perinatal death rate (i.e. deaths within the first 28 days of life) of 5.68 per 1,000 births.

The most important modifiable risk factors for stillbirth are smoking, raised body mass index, pre-existing hypertension and diabetes, and placental abruption (separation of placenta from the womb). Advanced maternal age is also a risk factor and is becoming more common and women who delay seeing a midwife at the beginning of pregnancy are at increased risk. The majority of interventions designed to reduce the impact of these risk factors on birth outcomes are best delivered in the pre-conception period. These include weight management, healthy diet and exercise, and planning of the pregnancy in women with diabetes. Wales has a National Stillbirth Committee which is working with Health Boards across Wales to improve antenatal practice and standardise public health approaches.

## Timing of childbearing

**Figure 24: Number of live births by age of mother, Wales, 1971-2013**



Source: Office for National Statistics (ONS)

Babies born in Wales in 2013 were most likely to have a mother aged 25-34, with over a half (57 per cent) of mothers in this age group.

A further 27 per cent of babies were born to mothers aged under 25, while 16 per cent had mothers aged 35 and over at the time of birth.

In 2013 the number of births to mothers aged 25-34 was more than double the number to mothers aged under 25.

The number of births in a given year is dependent on the number of women in the key childbearing ages (15-44 years) and on fertility

rates in that year. Compared with 2012, the number of live births in 2013 decreased for women in all age groups.

For women aged under 25, the fall in births resulted from falling fertility alongside an estimated decrease in the number of women in this age groups between mid-2012 and mid-2013. The decrease in births to women aged 25-34 in 2013 resulted from falling fertility at these ages since the estimated female population in these age groups increased.

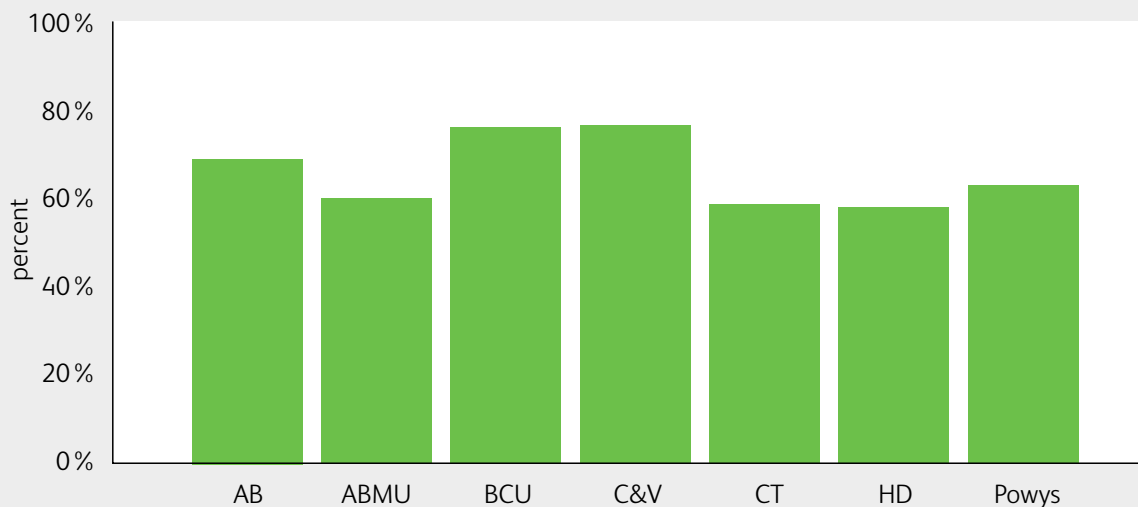
Antenatal care (from early pregnancy) is how interventions with proven effectiveness are delivered to pregnant women, including health promotion, screening, risk assessment and treatment. Barriers to timely and effective care are likely to include lack of knowledge of the importance of early access to services, unintended pregnancy, substance use, and belief that care is unnecessary. Increasing early and adequate participation in antenatal care, so that women receive evidence based interventions, will improve outcomes for mothers and babies for example:

- early advice and support on weight management and a healthy diet reduces weight gain during pregnancy

- smoking cessation in early pregnancy reduces the risk of low birth weight
- early referral to mental health services for women with existing mental illness can reduce the incidence of puerperal psychosis
- increased use of preventative care during infancy including immunisation
- early detection of fetal growth retardation
- early detection of gestational diabetes

Whilst over 80 per cent of women are seen by 12 completed weeks in Wales, all health boards have been asked to organise care in order that women are able to access local services by 10 completed weeks.

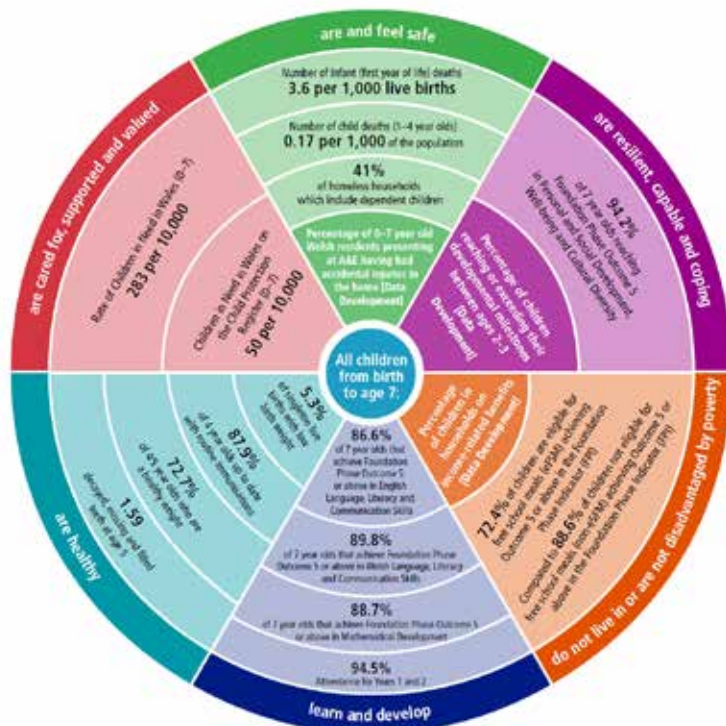
**Figure 25: Percentage of women with initial assessment carried out by 10 completed weeks by Health Board**



Source: Maternity Services Performance Board - self reported by Health Boards

## Progress so far and areas for action

Welsh Government's 2014-15 update report against the Early Years and Childcare Plan provides a snapshot of progress on a range of outcome measures in the early years.



Source: <http://gov.wales/docs/dcells/publications/150811-building-a-brighter-future-progress-report-2014-15-e.pdf>

Wales has a strong foundation of policy and practice on which to build, with significant progress and investment in recent years

- A rights based approach focused on delivering the core aims of the United Nations Convention on the Rights of the Child
- Adoption of National Standards of Participation, supporting children and young people to be listened to and treated with respect
- An Early Years and Childcare Plan, bringing coherence across different policies and progress impacting on the early years
- Securing a duty on Local Authorities to secure sufficient play opportunities, to ensure all children have a wide range of challenging and interesting opportunities to play and enjoy their leisure time
- A Child Poverty Strategy for Wales, reaffirming the Government's ambition to eradicate child poverty by 2020 and its commitment to deliver against through a number of strategic objectives
- A range of targeted programmes:
  - **Flying Start:** A programme targeted at zero to three year olds in the most disadvantaged communities in Wales. It aims to create positive outcomes in the medium to long term
  - **Integrated Family Support Services (IFSS):** A service designed to help families stay together by encouraging them to take positive steps to improve their lives. IFSS has been available across Wales since 2014.



- **Early Support Programme:** A programme setting out to ensure services used by young disabled children and their families are better co-ordinated, providing families with relevant information at the time that they need it.



There remains a growing body of evidence to continue to develop the policies and approaches. In particular, the 1000 days campaign could serve to galvanise all activities in pregnancy and early childhood and

the NHS with its partners should consider how such a campaign may be used in Wales.

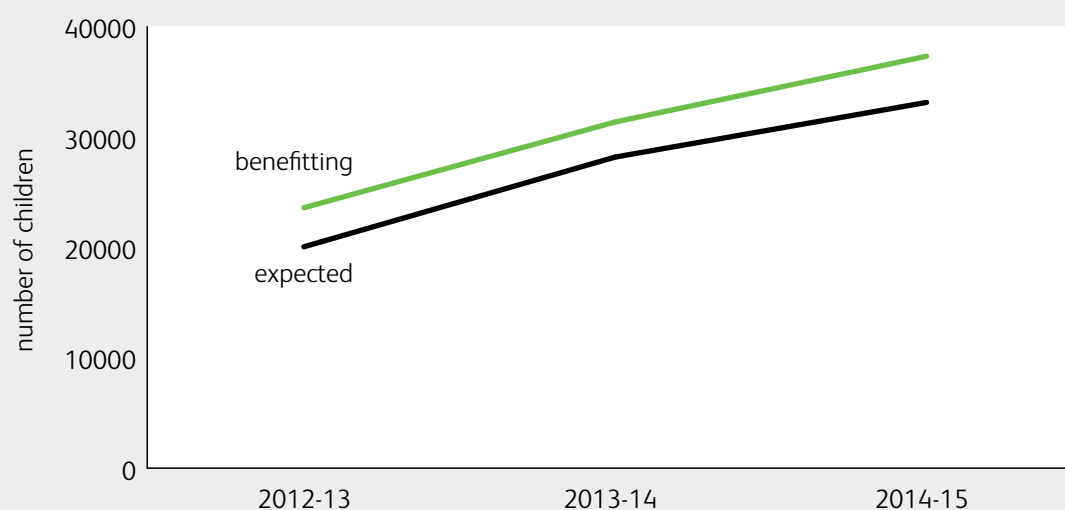
The Healthy Child Wales programme of surveillance has been reviewed during the year and this will form the basis of a stronger universal approach to helping parents and identifying problems early. Health Visitors are key professionals with skills in promoting child development. It is essential that **all** children are seen within the programme.

However, there is also a need to work with communities to ensure children have safe environments to play, green space to enjoy and access to physical activity. Wales' commitment to play is strong.

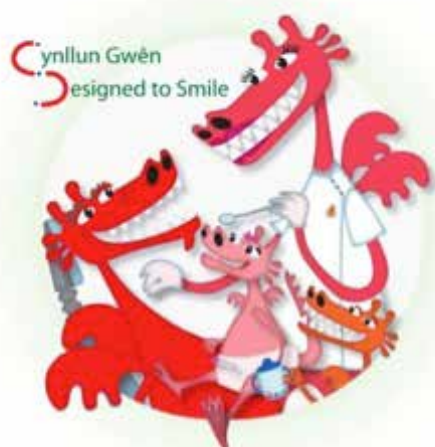
An area where improvements have been made is vaccination with clear support from parents to vaccinate their children. Chapter Four provides an update on the programmes. One aspect for continued attention is ensuring that all communities take up the vaccine. Rates are lower in some disadvantaged communities. Flexible services are required to ensure full uptake.

An example, of adopting good habits early in life is the Designed to Smile D2S targeted national oral health improvement programme for children (zero to six year olds) in disadvantaged areas of Wales. The latest published data (December 2014) show that uptake rates are increasing year on year. There are currently 92,948 children in 1,452 schools and nurseries across Wales taking part in the supervised element of the scheme (59.5 per cent of all children from pre-school to Year Two)<sup>23</sup>. Data from the latest survey undertaken by the Welsh Oral Health Information Unit (WOHIU) show that overall, in 2011-12, the dental health of five year olds (as measured by the proportion of children with experience of dental decay) has improved by six percentage points since 2007/08, and by 17 percentage points in children attending schools participating in the programme<sup>24</sup>. In March 2015, the WOHIU published its first survey of the dental health of three year olds<sup>25</sup>. It shows that amongst those children with decay, the average number of teeth affected by decay in Wales (2.9) was similar to the English average (3.1) and lower than the North West of England (3.3).

**Figure 26: Number of children in Wales in receipt of Flying Start Services (children benefitting), 2012-13 to 2014-15**



Source: Welsh Government Flying Start Data Monitoring Return 2012-13, 2013-14, 2014-15



## Health in the school setting

This is an ideal opportunity to develop health literacy and ensure effective support. The Donaldson review will set a new approach as described earlier. In the meantime, 99 per cent of schools engage in the Welsh Network of Healthy School Scheme, with 4.6 per cent achieving the National Quality Award. There is a target to have 10 per cent of schools achieving the Award by end 2015 and 20 per cent by 2020. The scheme should be reviewed to ensure maximum synergy with the new curriculum.

Following a consensus conference on school nursing, the Chief Nursing Officer is working with school

nurses during 2015-16 to refresh the 'Framework for School Nursing in Wales (2009)'. A scoping exercise, to establish the health needs of children in special schools, was completed at the end of November 2013. Based on recommendations from the report a pilot of 'a team around the family' approach for children in special schools is to be undertaken in ABMU Health Board area. The project commenced in November 2014 and will run for 12 months.

Healthy behaviours are showing some positive trends in the school age group.

## Smoking and drinking among adolescents

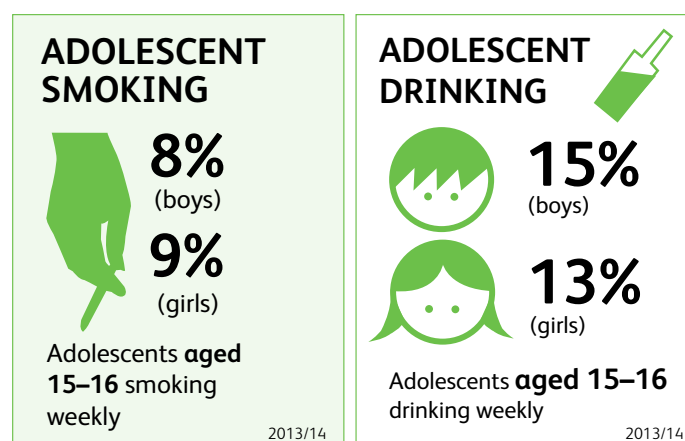
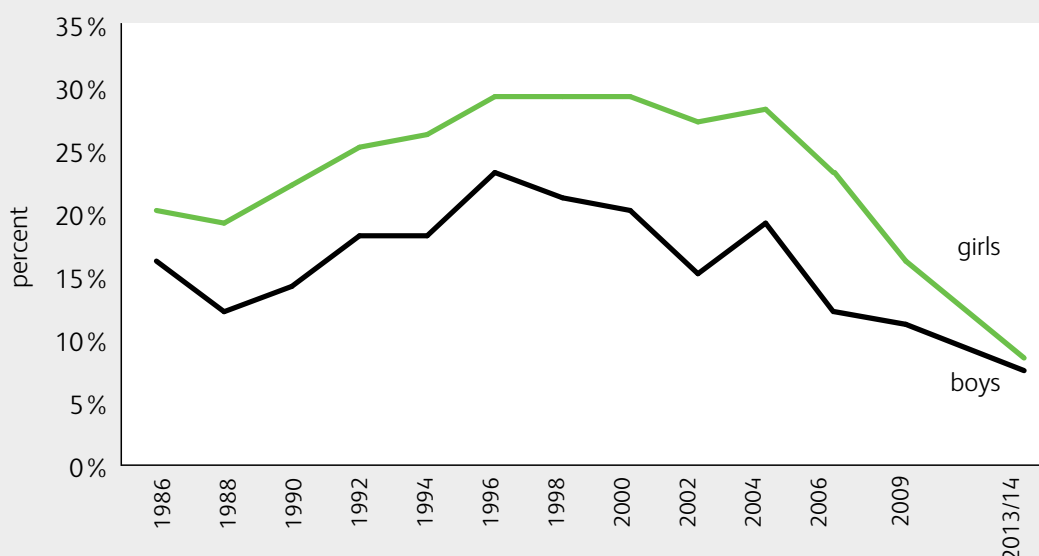


Figure 27: 15-16 year-olds smoking weekly, 1986-2013/14

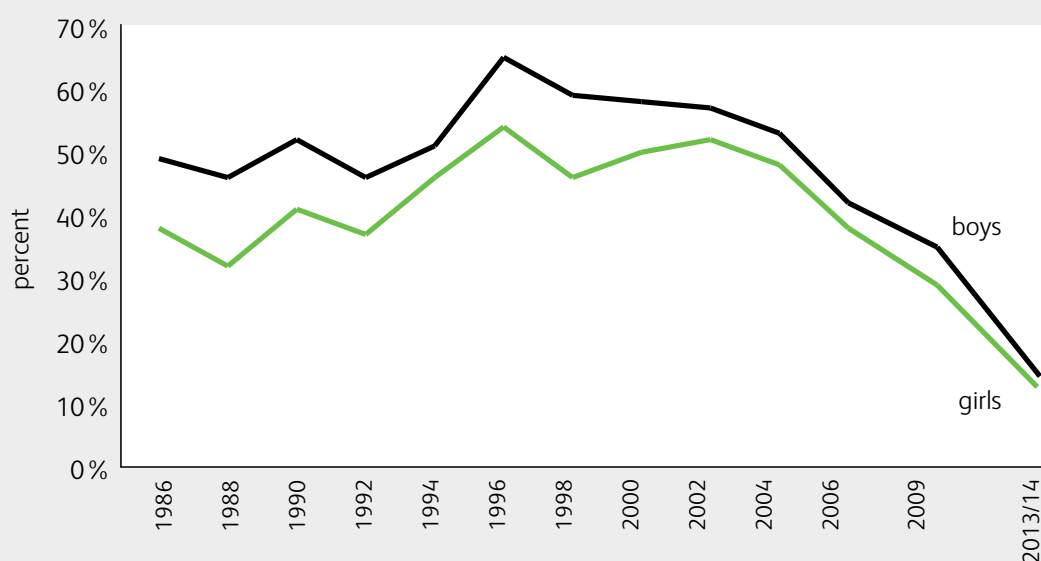


Source: Health behaviour in school-aged children survey (HBSC)

Results from the 2013/14 Health Behaviour in School-aged Children study<sup>26</sup> show that rates of smoking and drinking among adolescents in Wales have continued to decline sharply. Eight per cent of boys and nine per cent of girls aged 15 to 16 reported smoking weekly, and 15 per cent of boys

and 13 per cent of girls reported drinking weekly. These are the lowest rates for smoking and drinking recorded since the survey began in 1986, and are substantially below their peak around 1996 (figure 27 and 28).

**Figure 28: 15-16 year-olds drinking weekly, 1986-2013/14**



Source: Health behaviour in school-aged children survey (HBSC)

## Emotional wellbeing

There is much interest in the rising demand for mental health services for children. Promoting good mental health is important, so action to prevent future problems for example bullying, avoiding substance misuse, combating domestic violence and promoting self esteem, is important. Child death review information shows suicide is one of the highest causes of injury related deaths in adolescence. Societal and whole school approaches to mental health support such as school counselling, peer support mentoring and supporting children should translate into happier, more resilient youth who can build sustaining healthy relationships.

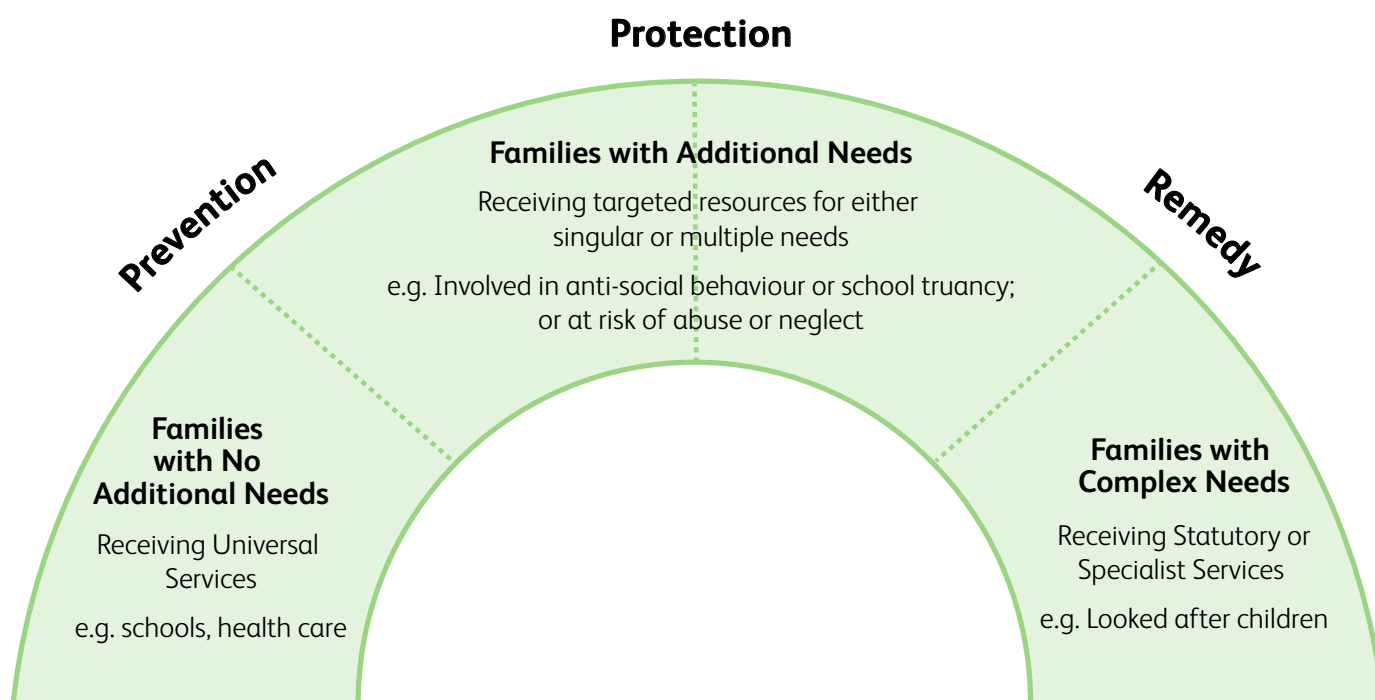
Despite the improvement in preventive approaches, referral to Children and Adolescent Mental Health Services (CAMHS) has increased substantially year on year, with over a 100 per cent increase in referrals between April 2012 and March 2014. Many of these referrals turn out not to be in need of that

specialist service, with the consequence that young people who do need the mental health expertise of a CAMHS service are waiting longer for the help and support they need.

To address this, the NHS is leading service change and reconfiguration. This approach is in line with prudent healthcare, enabling the most appropriate professional and agency to work within their field of expertise, and ensuring the young person and their family receives treatment or advice and support that is appropriate to their needs. In February 2015 the Minister for Health and Social Services launched a multi-agency service improvement programme which is considering ways to reshape, remodel and refocus emotional and mental health services. The programme has adopted the windscreen model, providing a continuum of support for children and families. As illustrated below each layer builds upon services to the left, so for instance, it assumes that health promotion and protection and universal services continue across the model.

The programme will focus on supporting early years development and the promotion of wellbeing and resilience in all young children, early identification and intervention and then more specialist services. Across this model, a continued emphasis on

emotional and mental health and wellbeing is essential. The ability to identify early on where there may be additional need for support is critical and will require increased focus to prevent young people needing the services of specialist CAMHS.



Source: 'Together for Children and Young People' Framework for Action

At the specialist end of the spectrum, there has been an additional £7.6m investment in CAMHS in 2015-16. The additional funding will improve the response out of hours and at times of crisis, expand access to psychological therapies for young people, improve provision for children and young people in local primary mental health support services and ensure services intervene early to meet the needs of young people who develop psychosis. The funding includes £2m to develop appropriate services for young people with neuro-developmental needs, such as Attention Deficit Hyperactivity Disorder (ADHD) and autistic spectrum disorders.

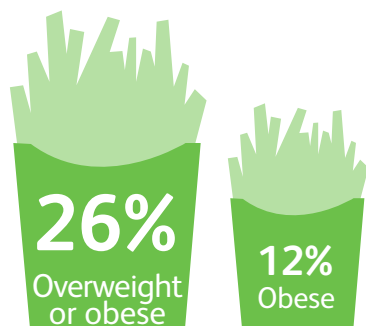
Further work in a number of areas is required, including transition of young people from CAMHS to adult services, inappropriate admissions onto adult wards, young people in the youth justice system and in relation to the provision of inpatient services. Welsh Government has established a service improvement plan to improve provision

in key areas such as inappropriate admissions and transition. This is an area where flexible approaches are required. Swansea University has been commissioned to undertake a comprehensive analysis of prescribing practice for stimulant and antipsychotic medication for children and young people. Wales appears similar to other countries in experiencing an increase in prescribing, particularly for 15-18 year olds, both for antidepressants and ADHD medication. In Wales the rates of ADHD diagnosis have remained stable over the period 2003-2013 and incidence of prescriptions have increased significantly, four times higher in boys and two times higher in deprived areas. Antidepressant prescribing also showed a significant increase since 2006, three times higher for girls and two times higher in deprived areas<sup>27</sup>. The strong link between deprivation and prescribing is also important in the current economic climate.

## Childhood obesity

### CHILD OBESITY

Children aged 4–5 years



2013/14

Another area of ongoing concern is obesity. Data from the last Child Measurement Programme for Wales report for academic year 2013/14 showed nearly three quarters of the children measured (72.7 per cent) had a body mass index (BMI)

classified as being of a healthy weight. This is a small decrease on last year (from 73.2 per cent), but it is not statistically significant. The prevalence of those overweight or obese in Wales in reception year (26 per cent) was significantly higher than that for England (23 per cent). There was a strong relationship between levels of obesity and deprivation – 28.5 per cent of children living in the most deprived areas of Wales were overweight or obese, compared to 22.2 per cent in the least deprived areas. For obesity alone, 13.5 per cent of children in the most deprived areas were obese, compared to 9.8 per cent in the least deprived areas. Considering the three years worth of reporting together, it suggests that the level of overweight and obesity in reception year children may have



plateaued and the variation between the most and least deprived areas remains at a similar level.

Good nutrition in early years is essential. This is not just about overall consumption but also about a balanced healthy diet. This starts with breastfeeding, using vitamins as appropriate and advising parents on healthy eating, such as through Change4Life campaigns. Families have an important role in influencing childrens' dietary habits. I was pleased to see the Welsh Government accepting in full the recommendations made by the Scientific Advisory Group on Nutrition (SACN) in their report on Carbohydrates and Health. The Committee's report highlights the importance of carbohydrates in our diets, the need for more fibre and less free sugars ("free" sugars are those added to food and which are naturally present in honey, syrups and unsweetened fruit juices, but excludes those naturally present in whole fruit and vegetables and dairy products). It advised the intake of free sugars should be halved to no more than five per cent of daily energy intake to help address the growing obesity and diabetes crises and to reduce the risk of tooth decay. For children, this is equivalent to 19g or 5 cubes of sugar for 4-6 year olds, 24g or 6 cubes of sugar for 7-10 year olds, and 30g or 7 cubes of sugar for 11 years and over. In particular, the Committee also advised that the consumption of sugar sweetened beverages should be minimised. SACN found the evidence demonstrates drinking high-sugar beverages results in weight gain and increases in BMI in teenagers, and increases the risk of type 2 diabetes. These are the main sources of sugar in our children's diets

However, further legislative action is required, such as a ban on advertising foods high in fat, salt and sugar on TV and the internet which is aimed at children, and targeted taxation, which could help reduce obesity among children. These powers are not devolved and should continue to be raised at UK level.



## Diabetes in Children

Between 140 and 170 children in Wales are diagnosed with diabetes every year; more than 95 per cent of them will have type 1 diabetes<sup>28</sup>. Children of all ages (from infancy to adolescence) can develop diabetes; around a quarter of new cases are in children less than five years old. In the UK, Diabetic Ketoacidosis (DKA) is common at the time of diagnosis of diabetes (a third of under fives are in DKA at diagnosis); this is potentially life threatening and frightening for children and their families. Early recognition is vital and professionals and families need to be aware of the symptoms that might indicate this diagnosis. Diabetes UK has promoted information on this.

Whereas the prevalence of Type 1 diabetes is equally distributed across society, there is a clear gradient in distribution for Type 2 diabetes with a greater proportion coming from the most deprived areas compared to the least deprived. Children's services have been prioritised in the diabetes delivery plan and an all Wales paediatric diabetes network established, so that all 14 centres can share the latest research and ensure that they all deliver the same high quality care.

### COULD YOUR CHILD HAVE TYPE 1 DIABETES?

If your child is going to the toilet a lot, has increased thirst, is more tired than usual or is losing weight, it could be a sign they have Type 1 diabetes. If not diagnosed early enough, Type 1 diabetes can be fatal. Don't delay – if your child is experiencing any of the **4 Ts**, visit your doctor immediately for a test.

[www.diabetes.org.uk/The4Ts](http://www.diabetes.org.uk/The4Ts)

**DIABETES UK**  
CARE. CONNECT. CAMPAIGN.  
A charity registered in England and Wales (215199) and in Scotland (SC2358138)

Source: Reproduced by permission of Diabetes UK, August 2015. For more information or support in managing diabetes go to [www.diabetes.org.uk](http://www.diabetes.org.uk)

## Accident and injury prevention

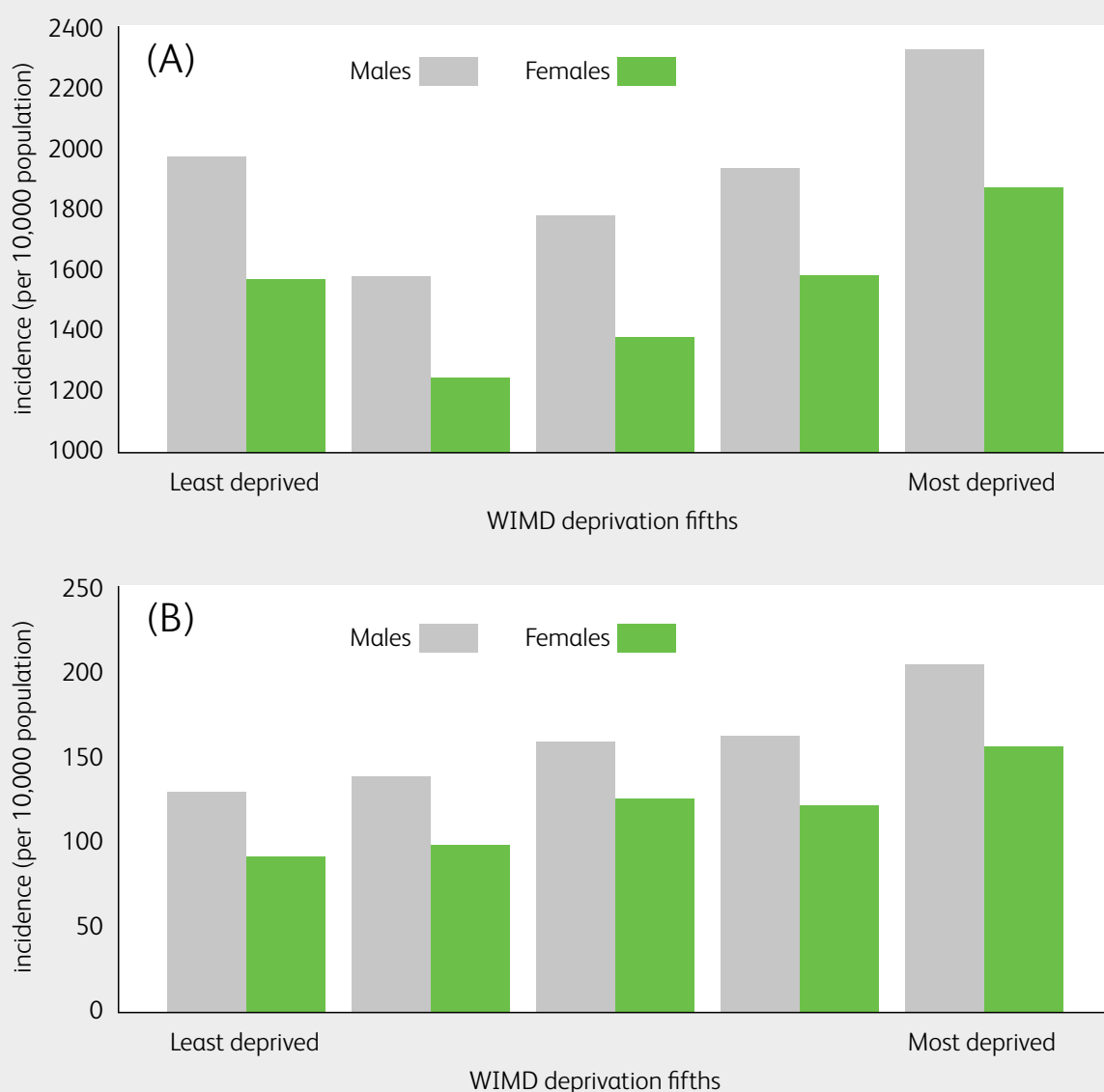
Unintentional injuries are a public health concern and a leading cause of health inequity. Around one fifth of Emergency Department (ED) attendances in children aged zero to four in Wales are due to falls, slips or trips resulting in head injuries and concussion.

Wales has a higher child injury death rate than any other country in the UK. The risk of death to children living in the most deprived areas of Wales is 70 per cent greater than in those living in the most affluent areas. The incidence of ED attendances and in-patient admissions are highest in the most deprived areas (Figures 29, A and B). ED attendances in Wales during 2010-2013 for head injuries/concussions were almost double in children living in the highest deprivation compared to children living in the least deprived areas.

Effective interventions to reduce the number of unintentional injuries in Wales will not only reduce the pain suffered by children and their families but will have an added benefit of reducing the number of children being treated by the NHS in Wales. Child injuries cause significant financial costs and were reported at over £32 million in 2009.

Provision of a healthy, safe environment is vital to ensuring the best health outcomes for all children. Work is underway to develop an injury prevention strategy.

**Figure 29: ED attendances (A) and in-patient admissions (B) for child injuries grouped by gender and deprivation quintile (2009)**



Source: The Burden of Injury in Wales (2012)

Data produced by Public Health Wales and Swansea University based on EDDS (NWIS), MYE (ONS) and WIMD 2008 (WG) statistics

## Improving Services – Co-production with children, young people, families and carers

Children are not just ‘little adults’. The future shape of children’s health and wellbeing services – a broad and complex range of services that need to be responsive to need and interact effectively to provide genuinely child-centred care and support - need to be guided by the views of children and families if they are to be effective. At an individual level, health and care professionals need to become

expert in facilitating a transfer in power to enable children and their carers to have a major role in influencing their care. At an organisational level, the views of children need to be actively sought and comments acted on to inform service improvements.

There is also a case for better data on the impact of services and the relationship between services and broader outcomes, particularly in the early years. Improved data will allow for progress to be measured and understood and help target resources appropriately to need.

## Recommendations

1. Health Boards and partners should have a 'First 1,000 days plan' to ensure good quality universal services, universal identification of need for extra support, good antenatal services, good specialised perinatal mental health services, assessment and support for good attunement between parent and baby; and prevention of maltreatment. A strong link needs to be made between child development and child protection.
2. The Healthy Child Wales programme should be introduced during 2015-16 with an aim to achieve full coverage of all children. Every contact through the programme should be regarded as an opportunity to engage parents (mothers and fathers where possible) and carers in the importance of the first 1,000 days and the steps that can be taken to put children on the best life course.
3. All professionals in contact with children – particularly in the school setting – should understand the potential consequences of adverse childhood experiences through the life course and actions they can take to prevent and respond to identified problems.
4. Legislative action is needed to make faster progress on reducing obesity, specifically to ensure a reduction in consumption of sugar in childhood.
5. An injury prevention strategy should be produced during 2016.

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# Chapter 4

## Protecting the Public's Health

### The Role of Local Government



Source: Food Standards Agency

Local government in Wales has a long history of promoting and protecting the public's health. The initial focus of public health in Victorian times was on sanitary improvement, and local government was the appropriate organisation for these activities. It was in 1974 that the public health function was moved from local government and integrated into the National Health Service (NHS). In England the UK Government recently returned responsibility for improving public health to local government. Each upper tier and unitary local authority in England has taken on a new duty to improve the health of the people in its area.

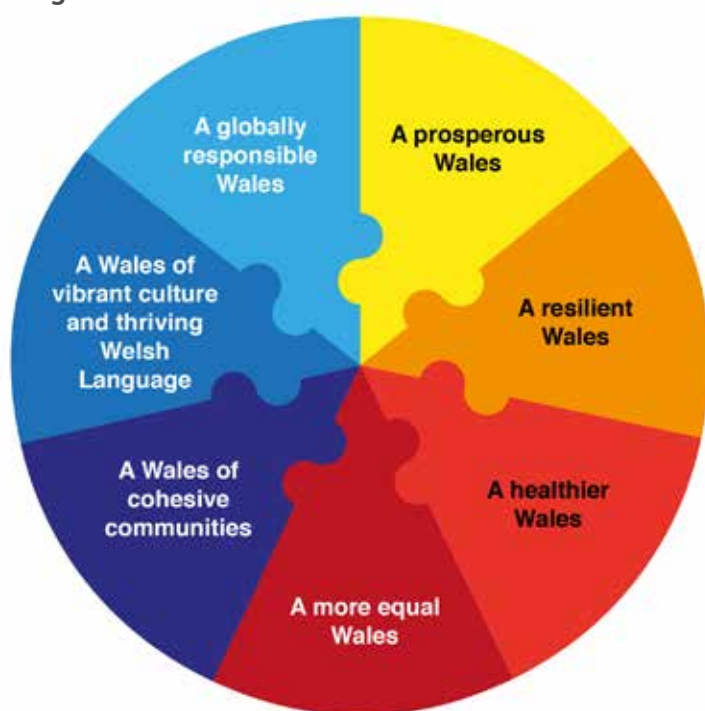
In Wales a collaborative approach has been adopted. The Well-being of Future Generations (Wales) Act 2015<sup>1</sup> places a duty on specified public authorities to work together to set objectives that are designed to maximise the achievement of statutory 'well-being

goals'. These goals will require a globally responsive; prosperous; resilient; healthier; more equal Wales; with cohesive communities; and a vibrant culture and thriving Welsh language. New Public Service Boards (PSBs) will be established for each council area to improve the economic, social, environmental and cultural wellbeing of its area and citizens by working to achieve these goals.

The Act will play an important role by placing good health at the centre of the Wales we want to create for the future. The goal of a healthier Wales will be to create a society in which people's physical and mental wellbeing is maximised and in which choices and behaviours that benefit future health are understood. The PSBs will be well placed to build alliances and take action at a Council level to improve the public's health.



Figure 30



Much of the work needed to achieve our aspirations for good health and reduce inequalities depends on concerted action across the range of societal factors which affect health and wellbeing. Whilst the Act provides an overarching framework for public services which supports a 'Health in All Policies' approach we need to work nationally and locally to influence both policy levers and local delivery systems. To support this Health Boards and local authorities need to work more closely together and with Public Health Wales to promote public health locally and nationally. The current location of Welsh Directors of Public Health in Health Boards could be described as pulling them away from rather than towards those with power, responsibilities, skills and budgets to impact on public health in their locality<sup>2</sup>. The Marmot Review<sup>3</sup> demonstrated the 'broader determinants of health' – people's local environment, housing, transport, employment, and their social interactions – can be significantly influenced by how councils deliver their core roles and functions.

If Directors of Public Health are to effectively lead, challenge, persuade and influence Health Boards and local authorities then they need to be jointly responsible and appointed by both. The Welsh Government wants all councils to be activist councils, engaged in delivering modern, accessible, high

quality public services with their communities<sup>4</sup>. Councils must be clear activists for public health. To do so Directors of Public Health need to be working at the most senior level, in both Health Boards and local authorities, with dual accountability to the Chief Executives to underpin partnership working with effective support. Facilitating this arrangement should be a key consideration in the reforming local government process currently underway in Wales.

The Well-being of Future Generations (Wales) Act 2015 provides an opportunity to shape the medium and long term future of public services in Wales. Councils are expected to reduce costs whilst retaining a duty to deliver many services that directly impact on public health. Reducing spending requires councils to prioritise which services matter most, based on an accurate, realistic assessment of costs, benefits and risks. As the first in a series of studies<sup>5</sup> looking at how councils are managing to deliver with less, the Wales Audit Office (WAO) has undertaken a study that considers the impact of reduced resources on the ability of council environmental health services to deliver their statutory obligations.

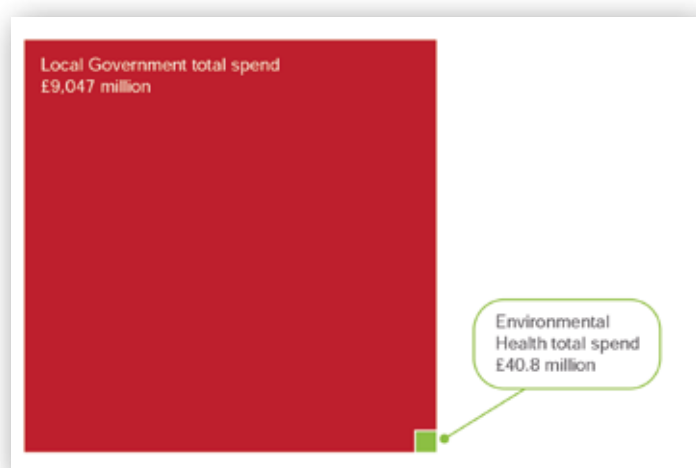
The WAO chose environmental health services for their first national study as it was highlighted as a service where councils should collaborate more effectively in the 'Simpson' Report<sup>5</sup>. Environmental health was also seen as a service that has been afforded less priority than other local government areas such as education and social services yet is highly valued by citizens and is the frontline for health protection and control of infection and environmental hazards. The WAO published *Delivering with Less – the Impact on Environmental Health Services and Citizens*<sup>6</sup> in October 2014.

Based on the WAO's findings, the Auditor General has concluded '*councils are mostly meeting their statutory environmental health obligations but because of budget and staff cuts, limited transformation work and poor resource planning, environmental health services are at risk of being unable to effectively deliver their current responsibilities or take on new statutory duties to protect the public and the environment in the future*'.



The study has revealed a significant reduction in resources for environmental health in the last three years. In 2013-14, spending on environmental health accounted for less than 0.5 per cent of all council expenditure, £39.5 million out of a total expenditure of £9,047 million. Councils have reduced environmental health service budgets by 4.3 per cent in the last three years. Since 2011-12, the number of full time equivalent staff across council services has fallen by about seven per cent but the number of staff employed in environmental health services has actually fallen by 16.4 per cent.

**Figure 31**



Source: Wales Audit Office budget and staff resources assessment, December 2013 to May 2014; and expenditure statements of all Welsh councils taken from the published statutory accounts 2012-13

The Welsh Government's five year legislative programme continues to provide new regulatory powers to local authorities to act on food hygiene, housing and wider public health. Environmental health services have a direct impact on the safety, health and wellbeing of all citizens and visitors to Wales.

In previous annual reports, I have highlighted the importance of the work of environmental health practitioners in dealing with public health concerns as diverse as cancer, obesity, infectious diseases, asthma, falls and excess winter deaths. I have also highlighted the growing public health importance of alcohol control, sunbeds, body piercing, air pollution, housing standards and food hygiene.

"In 2013 Wales became the first country in the UK to adopt a mandatory food hygiene rating scheme. Local authorities are required to rate food businesses within their area and the food business to display their rating at their premises where it can be easily seen by customers. This ensures consumers have access to easy to understand information on the hygiene standards of food businesses in order that they can make informed choices about where they decide to eat or buy food.

Food Standards Agency data has shown that the mandatory scheme has driven up food hygiene standards in Wales. Food businesses receiving "5" (very good) ratings increased from March 2012 to June 2015 by 26% from 33.2% to 59.8%. The percentage of food businesses receiving "3" (generally satisfactory) rating or higher is now 94.1%, an increase of around 14% since March 2012 (80.8%) showing a significant decrease in the percentage of food businesses receiving ratings that require improvement."

Environmental health contributes to the wider national agenda of health, wellbeing and public service improvement and plays an important direct and indirect preventative role<sup>7</sup>. The WAO report recommends improving efficiency and value for money by identifying the statutory and non statutory duties of council environmental health services. Clearly, in law, statutory services must be provided. However, that does not mean that the statutory services are necessarily the most important in terms of achieving the gains in health and wellbeing outcomes we want to see now. Public Service Boards will need to give careful consideration as to what exactly environmental health, council and wider public services should focus on based on what will make the biggest difference for health and wellbeing and the wider sustainable development goals.

The WAO study has revealed that environmental health services are reaching a tipping point and calls for councils to make new strategic choices and find more efficient and effective ways of working. Future proofing environmental health



Source: © Crown copyright (2014) Visit Wales

services is essential to ensure that statutory responsibilities are fulfilled. The Chartered Institute of Environmental Health (CIEH) has called on the Welsh Government and councils to afford some protection to environmental health to ensure that they can continue to deliver a service that is vital to health and wellbeing, appreciated by the public and businesses and represents value for money<sup>8</sup>.

Environmental health is often described as a 'Cinderella service', in that people fail to recognise the contribution it makes and the impact it has until it is no longer there. The benefits of the work of environmental health departments are often accrued and measured away from their council by creating savings and improved outcomes for other organisations such as the NHS. Proposals in the Public Health (Wales) Bill will provide environmental health teams with new and updated regulatory tools to protect people's health and promote wellbeing in Wales. These new regulatory powers will largely be funded by local authorities being enabled to charge reasonable fees to recover the cost of licensing, approval and registration procedures, and further fees to cover the costs of running and enforcing the schemes. It will ultimately be a decision for local authorities as to the fee to be raised, and the manner in which it will be collected but these fees

should be retained by the environmental health service to offset the cost of providing the service.

The Simpson report evidenced the work of environmental health and public protection in Wales as an illustration of better collaboration. Simpson acknowledged the considerable recognition and readiness within public protection services to work in a different way. Simpson predicted this would be driven further by the changing statutory and regulatory frameworks as well as the reduced availability of resources. He recommended that where regulatory risks are regional or national the regulatory service collaborate to deliver on a regional or national basis. Some progress has been made with the creation of a shared regulatory service between Bridgend, Cardiff and Vale of Glamorgan councils. However, given the risk to the sustainability of environmental health, action is needed to preserve the experience and knowledge currently available across local authorities to enable a better more resilient service to be created as part of the reforming local government process. There is a need to act now to preserve and build an environmental health service in Wales that cannot only actively contribute to public health locally but have the capacity to act beyond the local.

## Sexual Health



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In 2010 Welsh Government committed to improve sexual health, narrow sexual inequalities and foster a society that supports open discussion about relationships, sex, and sexuality. To achieve this aim the *Sexual Health and Wellbeing Action Plan for Wales 2010-2015* was produced<sup>9</sup>. The end of the plan presents an opportunity to reflect on the progress we have made and consider the challenges ahead.

Prior to the 2010 plan sexual health services in Wales had undergone significant structural change. Genitourinary medicine clinics and family planning services were combined into the Integrated Sexual Health Service. This had a large effect on reducing waiting times, improving accessibility and providing an acceptable service to patients<sup>10</sup>. Welsh Government renewed this commitment in 2010 with a focus on improving partnerships with primary care, social care and the third sector.

The 2010-15 plan highlighted important issues for action including teenage conception rates, sexually transmitted infections, and teaching of relationship education in schools.

## Teenage Pregnancy

Information available in 2010 showed that there were 44 conceptions for every 1000 15-17 year old

girls in Wales (at 2008), and improvement had been slow<sup>11,12</sup>. Moreover, 8 conceptions occurred for every 1000 13-15 year old girls in Wales.

Since then progress has accelerated. Rates have fallen by approximately one third for girls under 16 and under 18. Wales has lower rates of pregnancy in the under 18s than North East England which is the most appropriate region to compare it with as it has similar demographic characteristics to Wales. However, Wales has higher rates of teenage pregnancy than England or Scotland.

Within Wales, there has been a reduction in geographical differences in conception rate (Figure 32)<sup>13</sup>. However, continued attention is needed as there remains a variation in the rate by area (Figure 33)<sup>14</sup>.



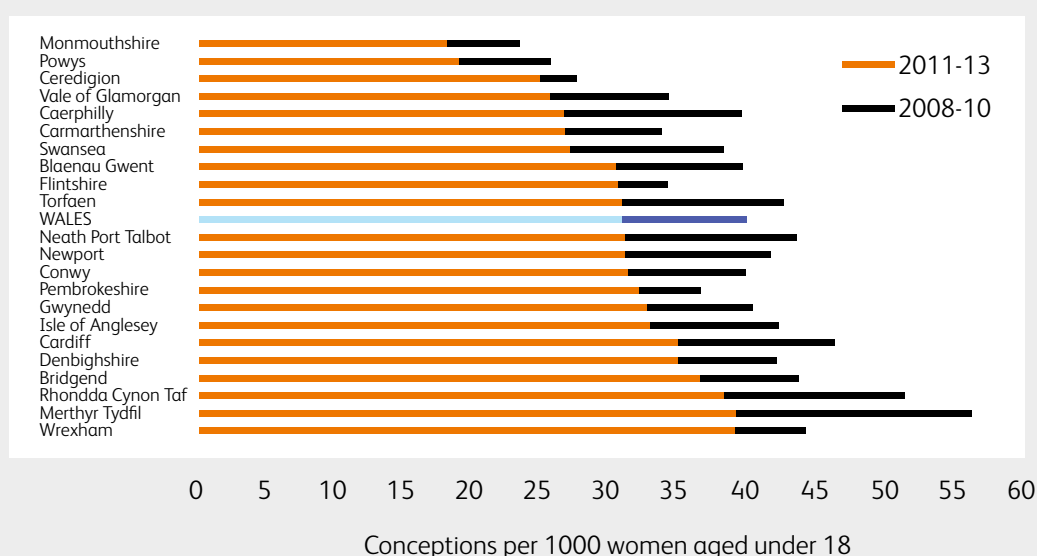
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**Figure 32: Distribution of the rates of conceptions in women aged under 18 in Wales and Welsh Local authorities in 2008-10 and 2011-13**



Source: ONS

**Figure 33: Rates of conception in women aged under 18 for each local authority in Wales 2008-10 and 2011-13**



Source: ONS

Between 2010 and 2015 the Empower to Choose project aimed to reduce repeat teenage conceptions through education and provision of long acting reversible contraception (LARC) to those in contact with local services of the British Pregnancy Advisory Service. Between 2012 and 2014 over 1000 doses of long acting reversible contraception were provided<sup>15</sup>. However, there is evidence of local variation in this service.

## Sexually Transmitted Infections

The latest available data on HIV/AIDS and other sexually transmitted infections (STIs) in Wales showed that the number of people diagnosed with STIs has increased over the last few years<sup>16</sup>. Despite the increase, rates of many STIs are lower in Wales than in England based on the most recent comparable figures (Figure 34).

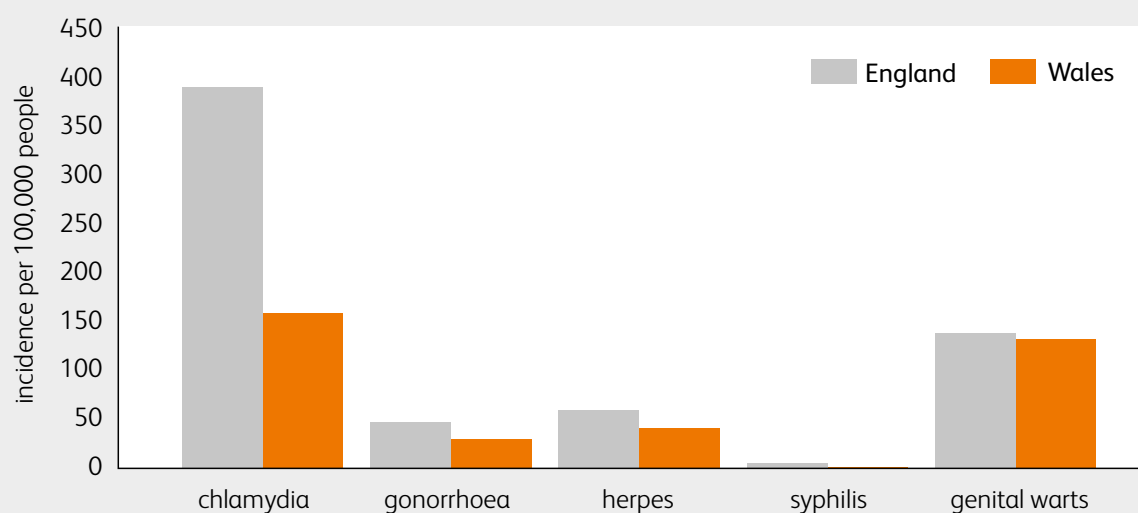
Perhaps the most notable increase is in diagnoses for Chlamydia and Gonorrhoea. Between 2010 and 2012 diagnosis of Chlamydia and Gonorrhoea increased by 20-30 per cent and over 200 per cent respectively<sup>17</sup>. This is in due at least in part to increased testing and to the investment in new tests used in integrated sexual health clinics which are more sensitive. However, for Gonorrhoea this is not sufficient to explain all the changes seen and there is good evidence that rates of Gonorrhoea are increasing in the population<sup>18</sup>. Further roll out of the new tests to GPs is expected in 2015/16 and may again lead to an increase in the diagnosis rate. However, increased spread in the population is of concern and presents its own challenges with evidence that microbial resistance is increasing<sup>19</sup>.

Positive Chlamydia tests are proportional to the number carried out, and therefore diagnosis rates are an indicator of testing activity. These highlight geographical variations as the highest rates were

seen where most testing was carried out. For instance, rates were significantly higher in Newport than in Merthyr Tydfil suggesting Newport residents have a higher chance of being diagnosed and treated<sup>20</sup>.

Rates of Chlamydia diagnosis in both men and women are approximately 10 times higher for those age 20 than for those aged 35 (Figure 35)<sup>21</sup>. This trend is seen for the majority of sexually transmitted diseases. However, the median age for diagnosis with syphilis and HIV are older at around 35 years old<sup>22</sup>. This may be a result of a difference in those most at risk with nearly 85 per cent of all diagnoses for syphilis and over half of those who are HIV positive being men who have sex with men<sup>23</sup>. Ethnic inequalities are also notable in HIV. Although most HIV diagnoses are in white individuals nearly 25 per cent of those living with HIV in Wales are of Black-African origin<sup>24</sup>.

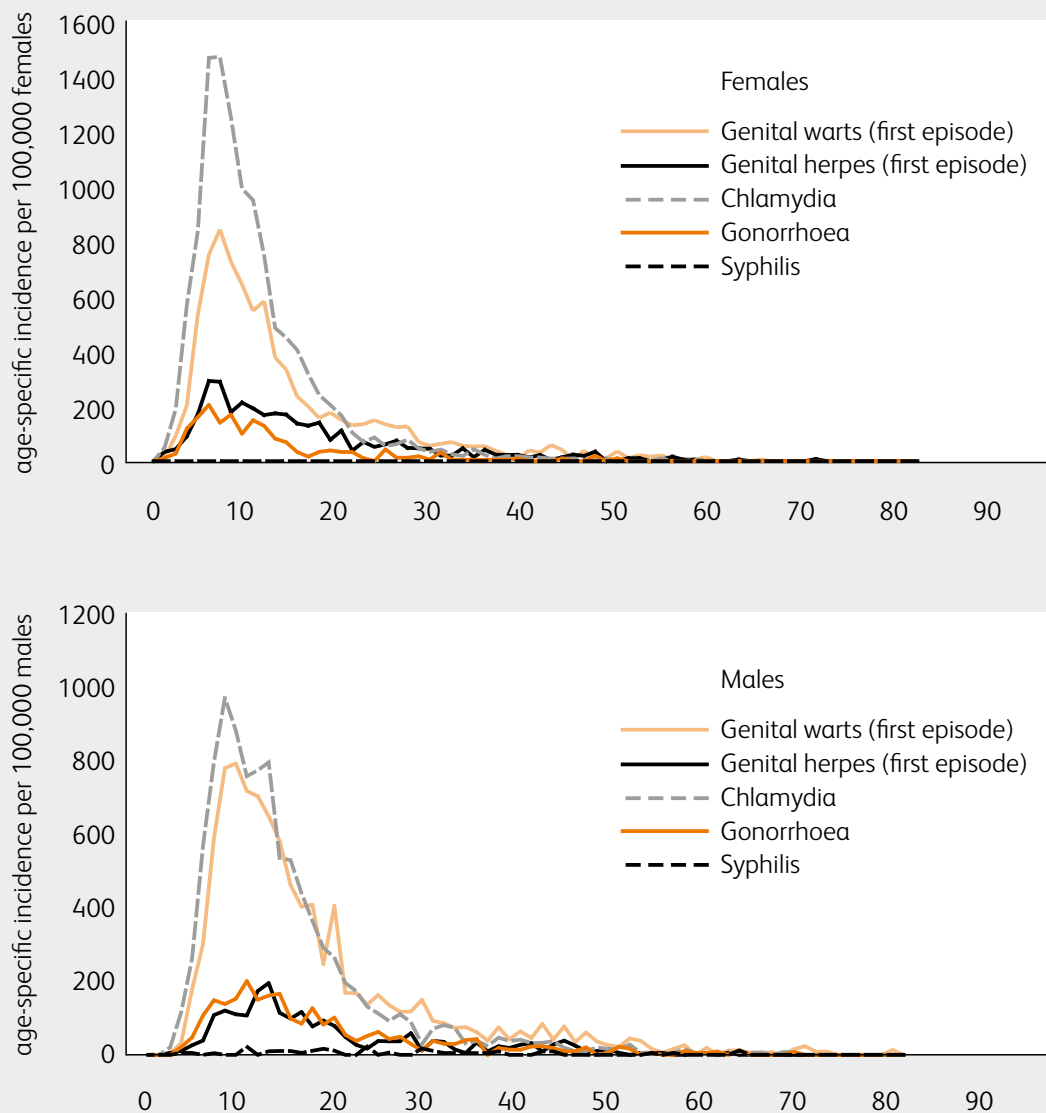
**Figure 34: Incidence of key sexually transmitted infections in England and Wales in 2012**



Source: PHW for Wales and PHE for England



**Figure 35: Age distribution of STI diagnoses made in Integrated Sexual Health Clinics across Wales in 2012**



Source: PHW

## Relationship education in schools

Prevention of pregnancy and sexual ill health was identified in the Sexual Health and Wellbeing Action Plan by emphasising the importance of individuals having the information, knowledge, skills and accessible services which allow them to make healthy choices about their sexual lives. Since 2010 the Welsh Government has supported schools, communities and further education providers to provide lifelong education in accessible and age appropriate ways. Initiatives have aimed to provide schools with a common platform for Sex and Relationship Education, including funding for Sense Interactive resources to be distributed to all schools

in Wales. Additionally, they have commissioned bilingual resources for parents to use in discussions with their children (Jiwsu resources)<sup>25</sup>.

As described in Chapter Three, Professor Graham Donaldson recommended in 2015 that a Health and Wellbeing area of learning and experience linking with sex and relationship education should form part of the new National Curriculum for Wales<sup>26</sup>.

## Where do we go from here?

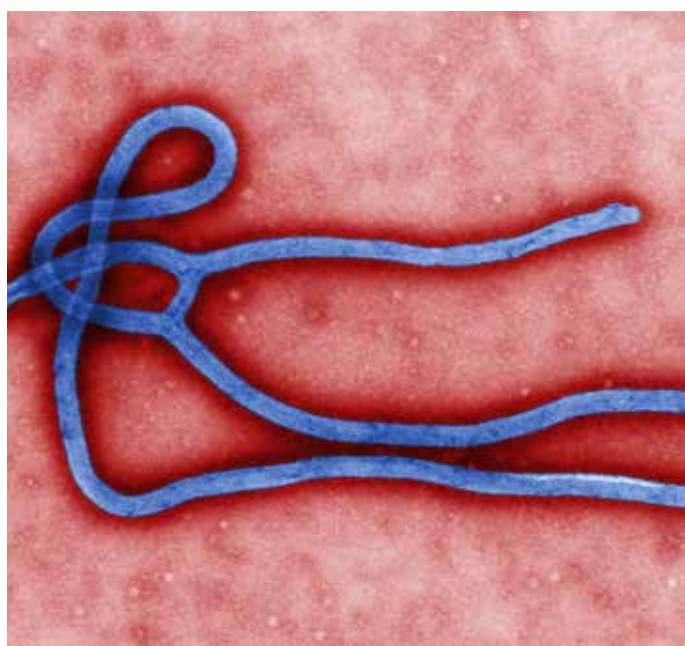
Progress over the last five years includes delivery of integrated sexual health services with specialised sexual health services now being offered in primary

care and each health board using local development plans to improve sexual health. However, there is a need to consider how the general trends in increasing STI prevalence can be reversed. One key element to this will be delivering the best quality relationship education and changes in risky sexual behaviours in young people.

The next revision of the Sexual Health and Wellbeing Action Plan should be developed with stakeholders to deliver improvements over the period 2016-2020. The focus of this action plan should be on reducing inequalities, ensuring best practice in healthcare, family planning, STI prevention and sexual and relationship education.

## Ebola 2014-2015

Ebola Virus Disease has been a global problem for much of 2014 and continues to be so into 2015. Since the Ebola virus was first described in 1978, a total of 19 Ebola Virus Disease (EVD) outbreaks have been reported. One year after the first Ebola cases started to surface in Guinea, this global outbreak has been recognised as the world's worst outbreak of its kind and has impacts across the globe from West Africa to Wales and far beyond. In January 2015 the World Health Organisation (WHO) published a series of 14 papers that took an in-depth look at West Africa's first epidemic of EVD<sup>27</sup>.



Source: CDC/ Cynthia Goldsmith

There have been a total of 27,514 reported, confirmed, probable and suspected cases of EVD in Guinea, Liberia and Sierra Leone up to 28 June 2015, with 11,220 reported deaths. In total, 874 confirmed health worker infections have been reported in Guinea, Liberia, and Sierra Leone; there have been 509 reported deaths.

We are indebted to the health care volunteers from Wales who have made such a significant personal contribution to managing the outbreak and I am pleased to see so many receive an humanitarian award at the 2015 NHS awards.

The EVD crisis over the last year has drawn attention to the well-recognised importance of reducing collective vulnerability to infectious disease threats that cross national borders. It illustrates the importance of global health security, which constitutes only one part of a broader set of human security threats. The epidemic is a clear reminder that improvements in the capacity of every country to find, stop, and prevent health threats is a global concern and Wales must maintain its capacity to contribute to this global effort<sup>28</sup> by maintaining effective clinical infectious disease facilities, rapid testing and diagnosis capability and an effective health protection service.

In Wales, although the risk from the ongoing outbreak in West Africa remains very low, plans are in place for dealing with any cases that are identified in Wales and to ensure that healthcare staff and the public are protected<sup>29</sup>.

To date, there have been no cases of Ebola in Wales. Although there is much public concern about the risk of catching Ebola, the NHS in Wales is well prepared. There has been much work over the last year planning for the possibility of Ebola cases in Wales. Local plans have been tested across Wales to ensure that healthcare workers know exactly what to do in the event of a possible or confirmed case. The priority is making sure we keep the Welsh public, and our healthcare staff, safe and give anybody who is infected the best care possible.

Public Health Wales has worked closely with all Health Boards and Trusts in Wales to ensure that



Source: 1000 Lives Improvement

they can respond appropriately to any possible case of Ebola presenting to their services. An extensive programme of staff training has taken place and each organisation has appointed an Ebola lead.

A number of exercises have also been undertaken to ensure plans work seamlessly and robust protocols are in place to ensure healthcare staff and the public are protected.

Public Health Wales also has tried and tested plans in place to monitor any healthcare workers returning from Ebola infected countries to Wales and has worked with Public Health England and other UK agencies to support the national response to any possible cases.

## Immunisation

Due to the expansions of our routine immunisation programmes in recent years, in Wales there are an increasing number of vaccinations delivered each year. In 2014 we saw high levels of vaccination uptake maintained. Working with Welsh Government, Public Health Wales continues to support Health Boards in ensuring high levels of vaccine uptake are maintained and in the implementation of new vaccination programmes against preventable diseases.

### Childhood immunisations

In 2014, uptake of all routine immunisations for babies in their first year of life exceeded the 95 per cent Welsh Government uptake target<sup>30</sup> apart from rotavirus which was recently introduced<sup>31</sup> and for which uptake has quickly increased to 90 per cent (Figure 36).



**Figure 36: Diseases which children are routinely immunised against (and current routine uptake levels (%)\*)**

**Before their first birthday**

Diphtheria (uptake 97 %)  
Tetanus (uptake 97 %)  
Whooping cough (Pertussis, uptake 97 %)  
Polio (uptake 97 %)  
Hib (uptake 97 %)  
Meningitis type C (uptake 97 %)  
Pneumococcal disease (uptake 96 %)  
Rotavirus (uptake 90 %)

**Between their first and second birthday**

Measles (uptake 97 %)  
Mumps (uptake 97 %)  
Rubella (uptake 97 %)  
Hib and meningitis type C booster (uptake 95.3 %)  
Pneumococcal disease booster (uptake 96.1 %)

**Between their second and fourth birthday**

Influenza (two, three and four year olds, uptake 37 %)\*\*  
Diphtheria, tetanus, pertussis and polio booster (uptake 93.2 %)

**Teenagers at school year 7 age**

Influenza (girls only, uptake 74 %)

**Teenagers at school year 8 age**

Human Papillomavirus (girls only, uptake 83 %)

**Teenagers at school year 9 age and older**

Tetanus, diphtheria and polio booster (uptake 71.8 %)  
Meningitis type C booster (uptake 79.3 %)\*\*

\* Public Health Wales Annual COVER statistics, 2013-14 (one year olds, two year olds, five year olds and School Year Eight)].

\*\* Public Health Wales influenza immunisation uptake reporting 2014-15.

\*\*\* Public Health Wales Quarterly COVER report 113 (Oct-Dec 2014)

Routine immunisations for infants in their second year of life, including uptake of the combined measles, mumps and rubella (MMR) vaccine also exceeded 95 per cent. Uptake rates for MMR vaccine exceeded 95 per cent in all seven Health Board areas during 2014<sup>32</sup>.



The proportion of children who were fully up to date with all routine immunisations by their fourth birthday during 2013-14 improved to 88 per cent, although this still means that more than one in ten children were not fully immunised by this age and this varied by region of Wales. Health Boards, with the help of Public Health Wales, are working to improve this situation and ensure that uptake levels in Wales are as high as possible.

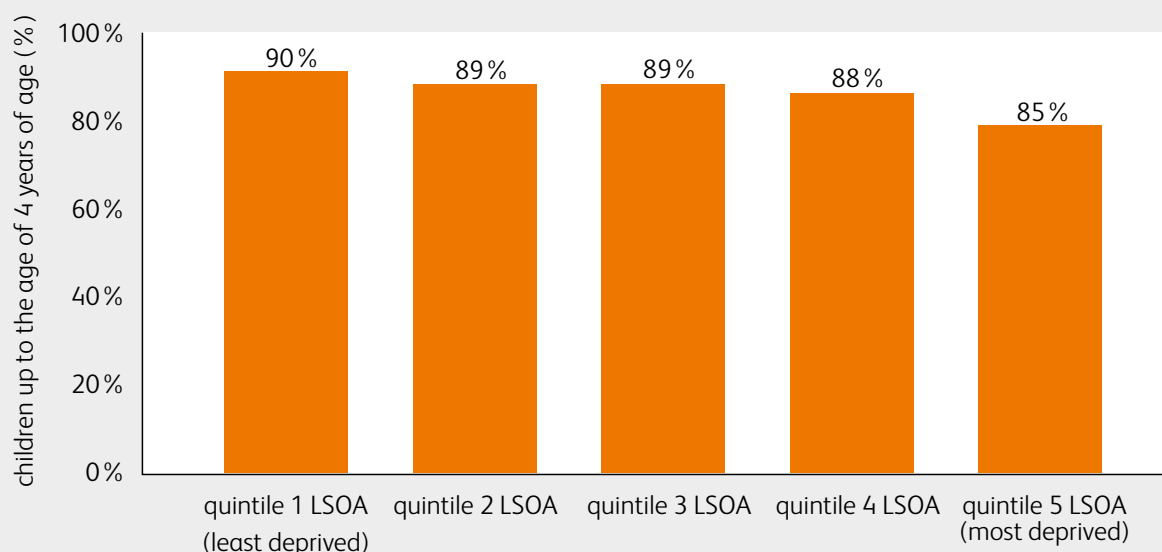
There is continuing evidence of inequality in the coverage of immunisations in children. The proportion fully up to date with immunisations by four years of age is lower in children living in the most deprived areas of Wales, compared to those living in the least (Figure 37). However, this gap has narrowed since 2013, from nine per cent to five per cent<sup>33</sup>.

While uptake rates for immunisations in babies and infants are higher than they have previously been, uptake of some booster immunisations in older children still fall short of optimal levels. This is also seen in other parts of the UK. For most routine childhood immunisations, uptake levels seen in Wales are comparable to those seen elsewhere in the UK and in some cases are higher (Figure 38).

During 2014, 89 per cent of teenagers reaching their 16th birthday had received a complete two dose course of MMR vaccine and 80 per cent had received their three in one teenage booster which reinforces immunity against diphtheria, tetanus and polio into adulthood. In June 2014, a booster immunisation

against meningitis caused by meningococcal type C bacteria was introduced<sup>34</sup>, by the end of 2014 uptake in 15 year olds had increased to 67 per cent nationally and further increases in uptake were seen subsequently<sup>35</sup>.

**Figure 37: Proportions of children reaching four years of age during 2013-14 who were fully up to date with routine vaccinations, according to the deprivation ranking of the Lower Super output Area (LSOA) where they live**



Source: Public Health Wales Communicable Disease Surveillance Centre and Vaccine Preventable Disease Programme

**Figure 38: UK immunisation coverage rates**

	5 in 1 immunisation in 1 year olds*	One MMR dose in 2 year olds*	Two doses of MMR in 5 year olds*	Three doses of HPV in school year eight (12-13 year old) girls**
Wales	96.9%	95.5%	93.6%	86.0%
N. Ireland	97.5%	94.5%	93.6%	87.2%
Scotland	97.3%	95.2%	93.0%	81.4%
England	94.1%	92.0%	88.6%	86.7%
UK	94.5%	92.5%	89.3%	—

\* UK COVER statistics, Jan-Mar 2015(5) (ref1)

\*\*Coverage in 2013-14 School Year 8 girls in Wales (1), Scotland (6) and England (7) ; and equivalent for Northern Ireland (8)

Source: Public Health Wales Communicable Disease Surveillance Centre and Vaccine Preventable Disease Programme



## Rotavirus

Infection with rotavirus is a common cause of gastroenteritis in children. It can also lead to severe dehydration and in a very small number of cases can be fatal. Although deaths from rotavirus in the United Kingdom are rare, the WHO estimated that rotavirus gastroenteritis was the cause of 453,000 child deaths globally in 2008.

In the UK, rotavirus gastroenteritis predominantly affected children, with an estimated 90 per cent of children having at least one episode of the illness by their fifth birthday. Vaccination against rotavirus was introduced into the routine childhood schedule of immunisation in Wales in July 2013<sup>36</sup>.

Rotavirus vaccination in Wales has quickly reached high levels of uptake. Following introduction of the rotavirus immunisation programme in Wales, there has been a dramatic reduction (88 per cent) in confirmed rotavirus infections in children aged younger than one year. There has also been a substantial decrease (21 per cent) in the GP consultation rate for gastroenteritis during the period of the year when rotavirus usually circulates. Both of these measures suggest likely direct effects of the rotavirus vaccination programme in Wales.

Reductions in the numbers of laboratory confirmed cases of rotavirus were not confined to detections in children aged younger than one year. The total number of confirmed cases at any age, in the first year following introduction of the rotavirus vaccination programme, also showed a marked reduction (81 per cent). Similarly, a substantial reduction (19 per cent) was seen in the average weekly GP consultation rate for gastroenteritis in children aged one to four years, during the period when rotavirus would be expected to circulate. Both of these measures suggest a wider effect of the rotavirus vaccination programme in Wales.

## Meningococcal B (MenB) vaccine

The incidence of invasive meningococcal disease in Wales and England has decreased by more than half since the early 2000s<sup>37</sup>. In 2014, there were 47

confirmed cases of meningococcal disease in Wales, including 36 caused by meningococcal MenB.

Three quarters of all MenB cases in Wales in 2014 occurred in children aged five years or younger and more than half were in children aged two years or younger. MenB cases were diagnosed in children in Wales as young as one month and peaked at eight to 12 months of age. Around a tenth of survivors of MenB disease have severe physical or neurological disabilities, including amputation, deafness, epilepsy and learning difficulties, and around one third of cases result in less severe physical or neurological disabilities.

From September 2015, a MenB vaccine will be added to the national routine childhood immunisation schedule. The vaccine will be offered routinely to all babies at the age of two months and again at four months, when they attend for their first and third routine childhood immunisations. A further booster will also be offered at 12-13 months at the same time as other current routine immunisations.

It is anticipated that the introduction of MenB immunisation should have a significant impact on reducing cases of meningitis and septicaemia and their complications in infants, and provide reassurance to parents who are concerned about the devastating consequences of this disease.

## Influenza

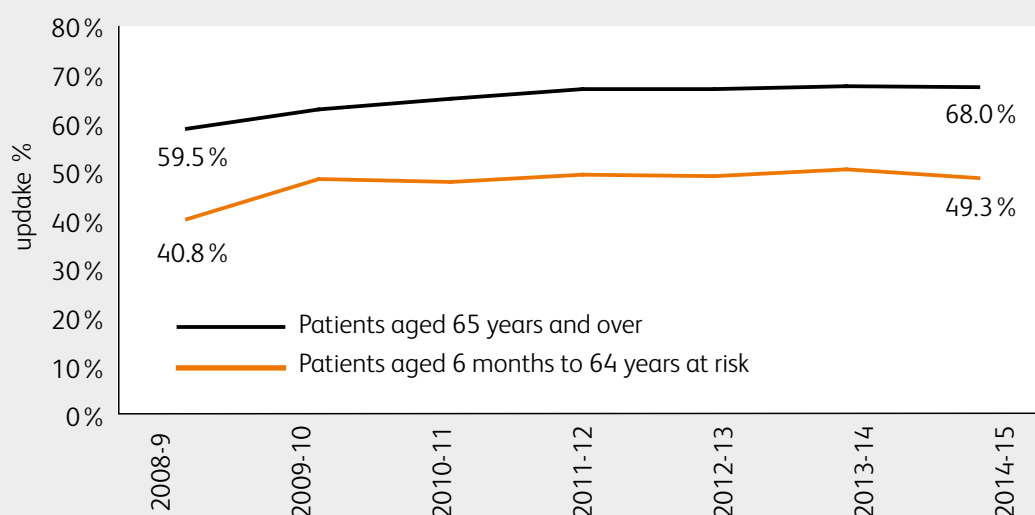
More individuals were immunised against seasonal influenza in Wales during 2014-15 than ever before. Influenza immunisation uptake rates were stable during the 2014-15 flu season for those aged 65 years and older (68 per cent) and decreased slightly for those aged six months to 64 years at clinical risk of complications of influenza (49 per cent) (Figure 39). Uptake of influenza immunisation in these groups in Wales is amongst the highest in Europe<sup>38</sup> although improvements are needed in order to reach the 75 per cent Welsh Government uptake target. During the 2014-15 winter period 44 per cent of NHS staff in Wales with direct patient contact were immunised against influenza

(Figure 40). This follows on from a long term positive trend seen in uptake over the past six years. This year, for the first time, the Welsh Government target for 50 per cent influenza immunisation uptake in NHS staff with direct patient contact was exceeded in two Health Boards and one NHS Trust (Betsi Cadwaladr University Health Board, Powys Teaching Health Board and Velindre NHS Trust)<sup>39</sup>.



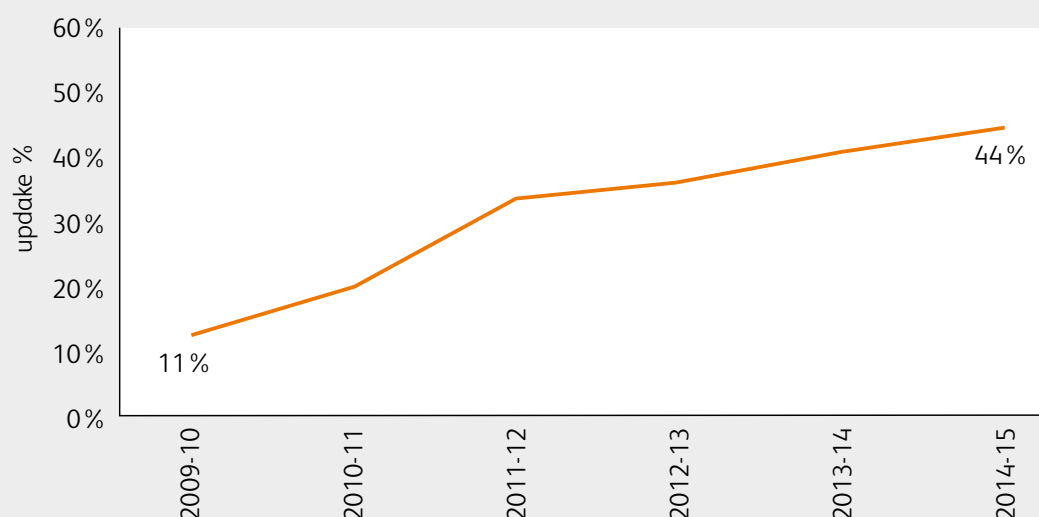
Source: © Crown copyright (2014) Visit Wales

**Figure 39: Trends in uptake of influenza immunisation in those aged 65 years and older and in those aged 6 months to 64 years who are clinically at risk**



Source: Public Health Wales Communicable Disease Surveillance Centre and Vaccine Preventable Disease Programme

**Figure 40: Annual trends in uptake of seasonal influenza vaccine by frontline NHS staff**



Source: Public Health Wales Communicable Disease Surveillance Centre and Vaccine Preventable Disease Programme

During 2014, Welsh Government announced that the scope of the childhood influenza immunisation programme would be extended to include all children aged four years of age<sup>40</sup>. More than 64,000 children received an intranasal vaccination against influenza over the 2014-15 winter period. The uptake in children aged two, three and four years of age was 37 per cent and the uptake rate in children in the School Year seven age-group was 74 per cent<sup>41</sup>.

## Influenza and pertussis in pregnancy

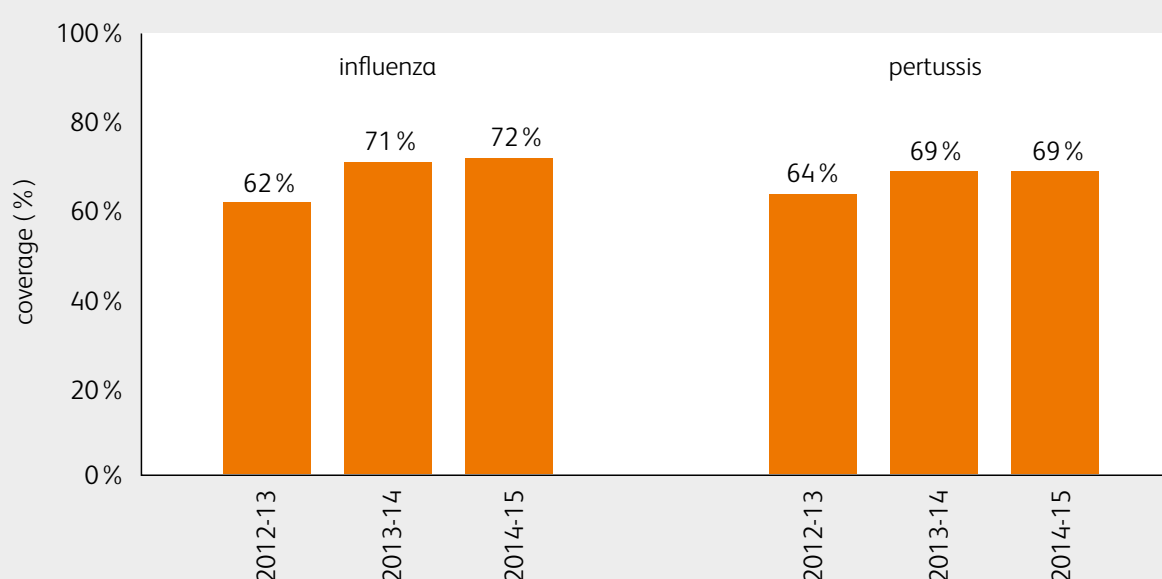
Over the 2014-15 winter period high levels of acceptance for immunisations recommended during pregnancy were seen. 72 per cent of pregnant women in Wales recalled having received immunisation against influenza and 69 per cent recalled having received immunisation against whooping cough<sup>42</sup>.

Figure 41 below indicates the continuing welcome progress in influenza and whooping cough immunisations uptake in pregnant women in Wales over the last three years.



Source: © Crown copyright (2014) Visit Wales

**Figure 41: Trends in uptake of influenza and whooping cough immunisations in pregnant women**



Source: Public Health Wales Communicable Disease Surveillance Centre and Vaccine Preventable Disease Programme

## Good Practice Example – Influenza Vaccination for Staff

In an effort to increase the uptake of the influenza vaccine given to employees of Betsi Cadwaladr University Health Board, some changes were made to the staff vaccination scheme in 2014-15.

- The staff immunisation policy was updated raising awareness of the importance of protecting patients from a flu infection by vaccinating staff.
- A new procedure was implemented which required all staff to complete a form if they were declining the flu vaccine. Use of this form prompted a discussion to take place which focused on whether declining the flu vaccine was a reasonable decision from a patient safety point of view. It also enabled staff to discuss their concerns which also gave some insight into the reasons why staff decline. The information discussed will help shape future campaigns.
- More staff volunteered to vaccinate colleagues in the clinical areas including those working in the community, therefore making access to the vaccine easier.

## Achievements

- Implementation of this policy and the hard work of the vaccinating staff, enabled the health board to achieve a 50 per cent uptake before the end of January 2015.
- All staff with direct patient contact improved their uptake by an average of 10.6 per cent.
- Two out of five occupational groups comprising clinical staff exceeded the target, with 86.5 per cent of allied health professionals vaccinated, an increase of 10.1 per cent and for medical and dental staff, an increase of 12.6 per cent which resulted in an uptake of 65.8 per cent.
- The uptake for nurses and midwives, which form the largest occupational group, reached 47.5 per cent, an increase of 6.1 per cent.

- The most improved uptake was seen in staff providing additional clinical services e.g. health care support workers who in the previous year had the lowest uptake but increased by 12.7 per cent to reach 39.3 per cent.

## Example of local initiative to improve influenza vaccines uptake

In Aneurin Bevan University Health Board, all of the 12 Clusters (locally called NCNs or Neighbourhood Care Networks) discussed the practice plans for Influenza immunisation in July 2014, supported by local colleagues from Public Health Wales. Peer review of the previous season's performance took place at subsequent meetings during the 14/15 season, using updated figures from the IVOR immunisation uptake dashboards. Good practice techniques were shared between practices, but most importantly, NCN representatives from other agencies such as Mental Health, Housing Associations and Communities First, were able to engage with the campaign and promote uptake through their own services. This meant that some of the most vulnerable and hard to reach patients received the relevant health promotion messages, from outside of traditional primary care. Uptake levels for people under 65 years old in high risk groups were the highest in Wales.

## Recommendations

1. Directors of Public Health should be jointly appointed by both Health Boards and Local Authorities with dual accountability to the Chief Executives.
2. Action should be taken to ensure sustainable Council environmental health services.
3. Councils identify regulatory risks that are local, regional or national and collaborate to deliver on an appropriate basis.
4. A new Sexual Health and Wellbeing Action Plan is required to guide prevention and service improvement covering the period 2016-20.

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# Appendix

## Looking back and looking forward

My previous report included a number of recommendations which aim to help create the conditions for better health, safer and more resilient health services and greater prosperity. I have provided updates on these below.

### Report for 2013-14

#### Chapter 1: Health, happiness and fairness

1. LHBs should use avoidable mortality as a way of measuring effectiveness of prevention and health care, and especially, to design actions to address the inequalities gap between most and least disadvantaged populations.	Data on avoidable mortality are updated annually by ONS and published by Health Boards as part of mortality indicator reporting. This shows the number of deaths and age standardised rates for avoidable mortality e.g. mortality amenable to good quality healthcare and preventable by public health interventions. The data are available at unitary authority level to enable comparisons and highlight inequality gaps that need to be addressed through integrated medium term plans
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#### Chapter 2: Primary and community services

1. LHBs should work with all relevant statutory and voluntary organisations, and with their communities, to ensure the resources are used to meet the differing needs of their population.	These requirements were built into the NHS planning guidance and built into the Integrated Medium Term planning processes.
2. LHBs separately and together should develop ways of helping to 'activate' people to take interest in and responsibility for their health, reviewing options such as working with patient support organisations, developing shared decision-making and improving health information.	This is work in progress with many examples of good practice. The co-production emphasis within the prudent healthcare movement is giving further impetus to this, and resources have been put in place to support organisations – see <a href="http://www.prudenthealthcare.org.uk">http://www.prudenthealthcare.org.uk</a>

### Chapter 3: Avoiding harm through preventing the preventable

<p>1. The Welsh Government, in cooperation with local and national agencies, should fully review Local Air Quality Management delivery in Wales in achieving legislative limits and reducing the public health impacts of poor air quality.</p>	<p>This is being considered by the Welsh Government in light of the outcomes of other work-streams. In particular the Welsh Government is currently undertaking a cross-departmental internal review regarding the effectiveness of LAQM in achieving legislative limits and in reducing the public health impacts of poor air quality.</p>
<p>2. The Welsh Government and local authorities should view investment in green infrastructure in our towns and cities as a public health investment, for the way in which it provides relief from the air pollution, noise and other stressors associated with modern living, and encourages and enables active travel and relaxation in the presence of nature.</p>	<p>Welsh Government has continued to offer revenue grants to local authorities for actions in relation to green spaces, noise and air quality, and this year for the first time is also offering grants to community groups for all these purposes. Spending proposals must deliver multiple benefits linked to the Well-being of Future Generations goals, which include “a healthier Wales”. Further details may be found at <a href="http://gov.wales/topics/environmentcountryside/environment-grants/?lang=en">http://gov.wales/topics/environmentcountryside/environment-grants/?lang=en</a>. Officials have also provided advice to the judges of the Green Flag Awards in Wales on the health and well-being benefits of tranquil green spaces in towns and cities.</p>
<p>3. Welsh Government should assess the case for possible introduction of meningococcal B vaccine in to Wales.</p>	<p>The meningococcal B vaccine is being introduced in Wales in the Autumn of 2015.</p>

### Chapter 4: Promoting healthy behaviours to prevent the preventable

<p>1. LHBs, Public Health Wales and the Welsh Government should assess the levels of physical activity in communities across Wales and look to share and take up evidence of good practice in promoting it.</p>	<p>The Welsh Health Survey currently provides data on levels of physical activity. Welsh Government, together with Sports Wales and Public Health Wales, recently appointed a Physical Activity champion to lead the development and implementation of a physical activity action plan, which will draw on the available evidence and support mechanisms for the sharing of best practice.</p>
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<p>2. The Welsh Government should continue to press for positive action to reduce sugar intake, including legislation at the UK level and policy action at the Welsh level.</p>	<p>Following recommendations from the Scientific Advisory Committee on Nutrition, Welsh Government will review all its nutritional advice, guidance and activity to aim to support people in Wales to reduce their consumption of ‘free sugars’ and reduce the levels of consumption of sugary drinks. The Minister for Health and Social Services has written to the Secretary of State to ask him to consider stronger action to address sugar in diets, and has specifically asked the UK Government to consider a pre-watershed ban on advertising for foods high in fat, salt and sugar.’</p>
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## Chapter 5: Avoiding harm through high quality and safer health care

<p>1. The Welsh Government and the NHS should review whether improving the transparency of NHS performance across Wales is helping to improve services and take action to ensure that it is doing so.</p>	<p>A review undertaken by Welsh Government across the Health Boards &amp; Trusts found that work was required in this area to ensure transparency of information. Launched in May 2015 “My Local Health &amp; Social Care Services” updates the approach. Another way of informing the public is the (AQS) Annual Quality Statement, published by each Health Board/Trust. An All Wales edition was published in June 2015</p>
<p>2. Welsh Government and LHBs should work together to ensure all healthcare professionals take ownership and responsibility for accurate clinical record keeping.</p>	<p>The updated Health and Care Standards (2015) has retained and strengthened the standard on record keeping. Recognising that good record keeping is essential to ensure that people receive effective and safe care. Health services must ensure that all records are maintained in accordance with legislation and clinical standards guidance.</p>